

# Random Activation of Gene Expression (RAGE)

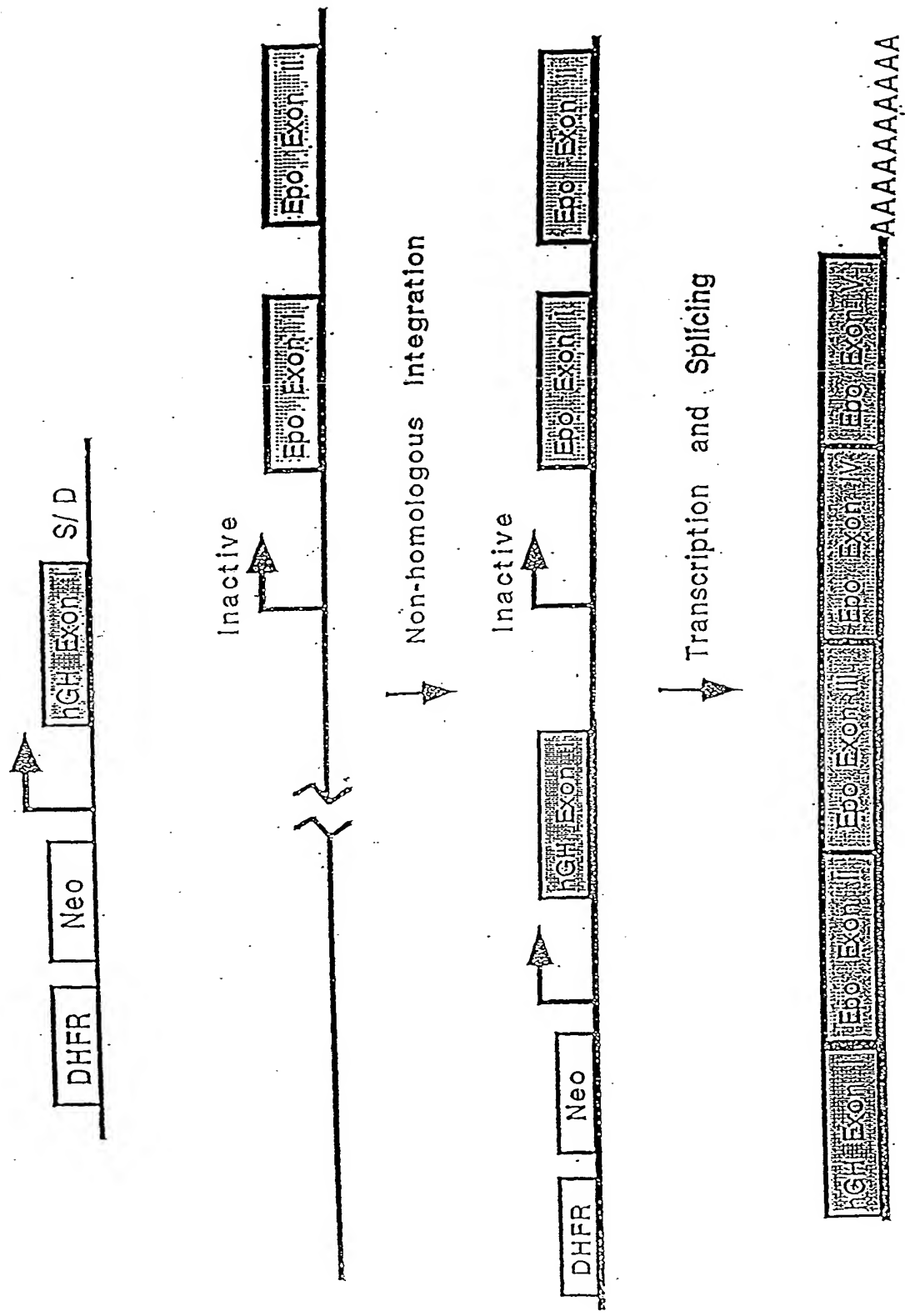


Figure 1

# Activation Constructs without Translation Start Codons

Construct #



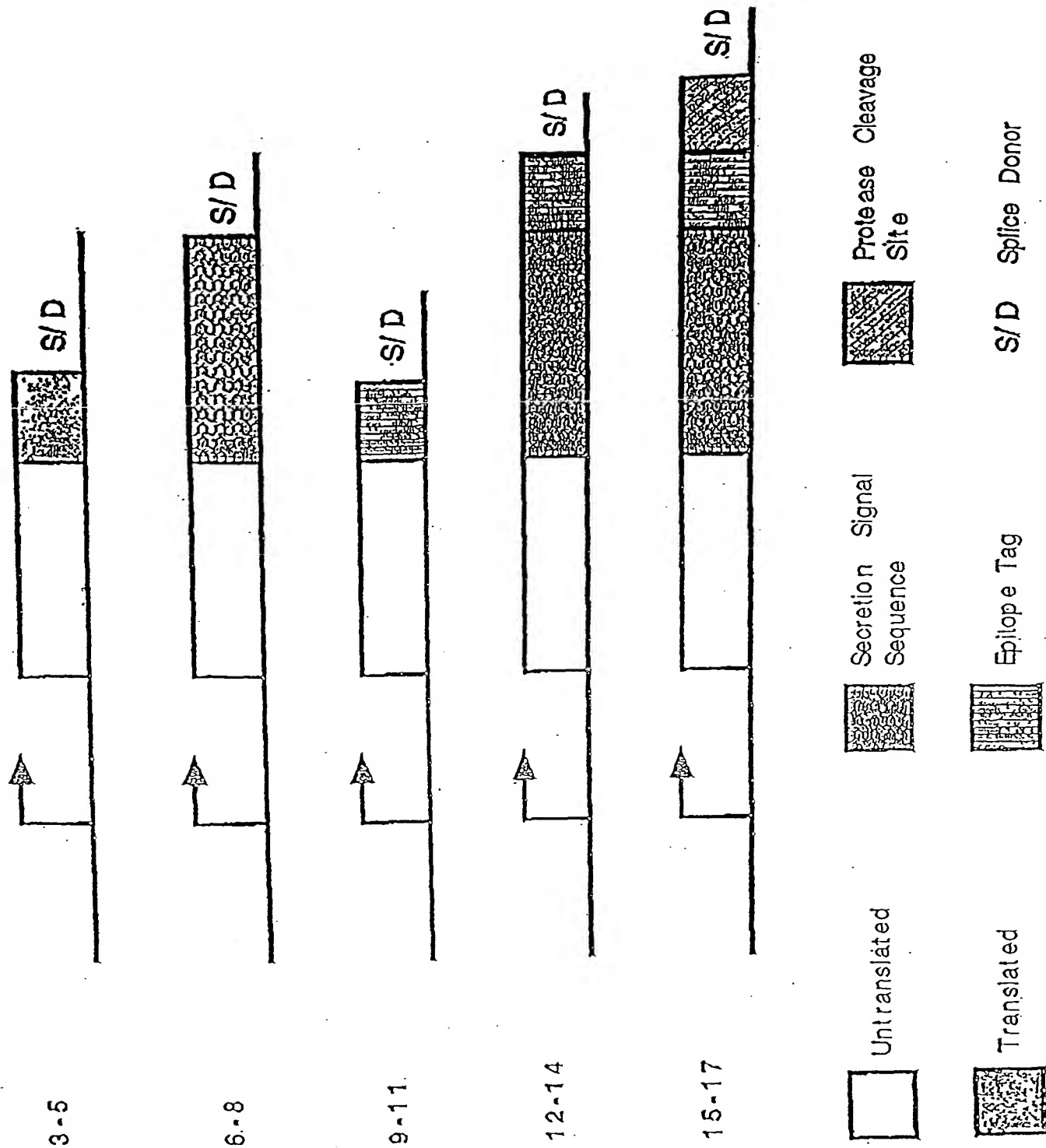
Untranslated

S/D Splice Donor

Fig. 2

Construct #

FIG. 3



# pRIG-1

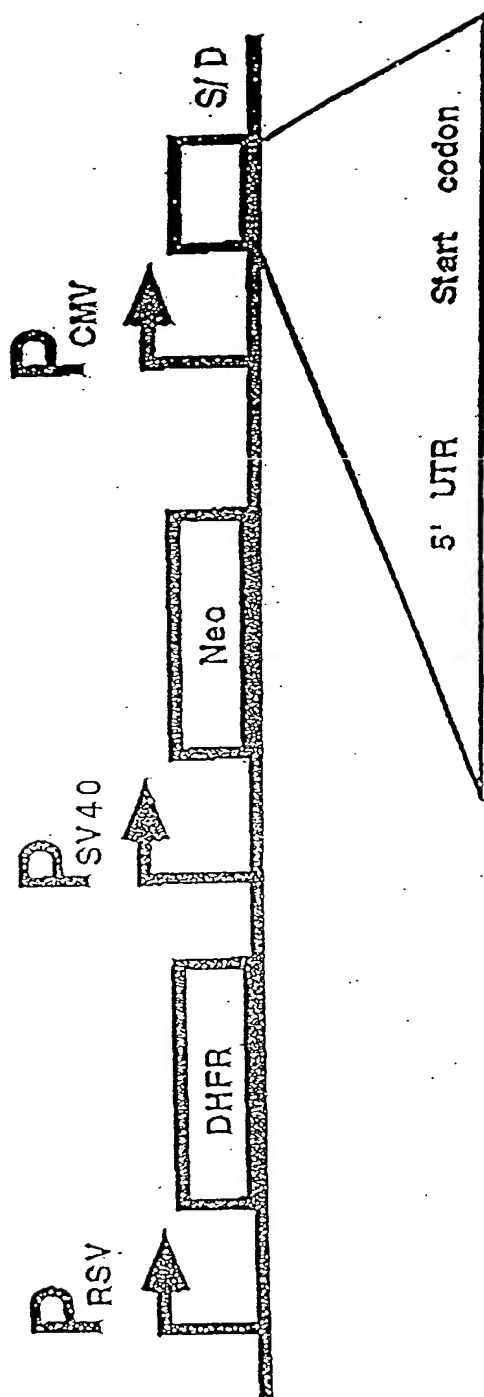


FIG. 4

5'AGATCCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAATC  
 AATATTGGCTATTGGCCATTGCATA  
 CGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAATATGACCG  
 CCATGTTGGCATTGATTATTGACT  
 AGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAGT  
 TCCGCGTTACATAACTTACGGTAAA  
 TGGCCCGCCTGGCTGACCGCCCAACGACCCCCGCCCATTGACGTCAATAATGACG  
 TATGTTCCCATAGTAACGCCAATAG  
 GGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGGC  
 AGTACATCAAGTGTATCATATGCCA  
 AGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCC  
 AGTACATGACCTTACGGGACTTTCC  
 TACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTTTT  
 GGCAGTACACCAATGGGCGTGGAT  
 AGCGGTTTTGACTCACGGGGATTTCCAAAGTCTCCACCCCATTGACGTCAATGGGAG  
 TTTGTTTTGGCACCAAAATCAAACGG  
 GACTTTCCAAAATGTCTGTAACAACTGCGATCGCCCCGCCCGTTGACGCAAATGGG  
 CGGTAGGCGTGTACGGTGGGAGGTC  
 TATATAAGCAGAGCTCGTTTGTGAACCGTCAGATCACTAGAAGCTTTATTGCGG  
 TAGTTTATCACAGTTAAATTGCTAA  
 CGCAGTCAGTGCTTCTGACACAACAGTCTCGAACTTAAGCTGCAGTGACTCTCTT  
 AATTAACCTCCACCAGTCTCACTTCA  
 GTTCCTTTTGCCCTCCACCAGTCTCACTTCAGTTCCTTTTGCATGAAGAGCTCAGAA  
 TCAAAAAGAGGAAACCAACCCCTAA  
 GATGAGCTTTCCATGTAAATTTGTAGCCAGCTTCCTTCTGATTTTCAATGTTTCTT  
 CCAAAGGTGCAGTCTCCAAAGAGA  
 TTACGAATGCCTTGGAAACCTGGGGTGCCTTGGGTCAGGACATCAACTTGGACAT  
 TCCTAGTTTTCAAATGAGTGATGAT  
 ATTGACGATATAAAATGGGAAAAAACTTCAGACAAGAAAAAGATTGCACAATTCA  
 GAAAAGAGAAAGAGACTTTCAAGGA  
 AAAAGATACATATAAGCTATTTAAAAAATGGAACCTCTGAAAATTAAGCATCTGAAG  
 ACCGATGATCAGGATATCTACAAGG  
 TATCAATATATGATACAAAAGGAAAAAATGTGTTGGAAAAAATATTTGATTTGAA  
 GATTCAAGAGAGGGTCTCAAAACCA  
 AAGATCTCCTGGACTTGTATCAACACAACCCCTGACCTGTGAGGTAATGAATGGAA  
 CTGACCCCGAATTAAACCTGTATCA  
 AGATGGGAAACATCTAAAACTTTCTCAGAGGGTCATCACACACAAGTGGACCACC  
 AGCCTGAGTGCAAAATTCAAGTGCA  
 CAGCAGGGAACAAAGTCAGCAAGGAATCCAGTGTGAGCCTGTCAGCTGTCCAG  
 AGAAAGGGATCCAGGTGAGTAGGGCC  
 CGATCCTTCTAGAGTCGAGCTCTCTTAAGGTAGCAAGGTTACAAGACAGGTTTAA  
 GGAGACCAATAGAACTGGGCTTGT  
 CGAGACAGAGAAGACTCTTGCCTTTCTGATAGGCACCTATTGGTCTTACGCGGCC  
 GCGAATTCCAAGCTTGAGTATTCTA  
 TCGTGTACCTAAATAACTTGGCGTAATCATGGTCATATCTGTTTCCTGTGTGAA  
 ATTGTTATCCGCTCACAAATCCACA  
 CAACATACGAGCCGGAAGCATAAAGTGTAAGCCTGGGGTGCCTAATGAGTGAG  
 CTAACCTCACATTAATTGCGTTGCGCGATGCTTCCATTTGTGAGGGTTAATGC-

Figure 5A

TTCGAGAAGACATGATAAGATAACATTGATGAGTTTGGACAAACCACAACAAGAAT  
 GCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAA  
 CCATTATAAGCTGCAATAAACA  
 AGTTAACAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGGAGATGTGG  
 GAGGTTTTTTAAAGCAAGTAAAACC  
 TCTACAAATGTGGTAAATCCGATAAGGATCGATTCCGGAGCCTGAATGGCGAAT  
 GGACGCGCCCTGTAGCGGCGCATT  
 AGCGCGGCGGGTGTGGTGGTTACGCGCACGTGACCGCTACACTTGCCAGCGCCC  
 TAGCGCCCGCTCCTTTTCGCTTTCTTC  
 CCTTCCTTTCTCGCCACGTTTCGCGGGCTTTCCCGTCAAGCTCTAAATCGGGGGC  
 TCCCTTTAGGGTTCCGATTTAGTGC  
 TTTACGGCACCTCGACCCCAAAAAAAGCTGATTAGGGTGATGGTTCACGTAGTGGG  
 CCATCGCCCTGATAGACGGTTTTTC  
 GCCCTTTGACGTTGGAGTCCACGTTCTTTAATAGTGGACTCTTGTTCCAACTGG  
 AACAACACTCAACCCTATCTCGGT  
 TATTCCTTTTGATTTATAAGGGATTTTGCCGATTTCCGGCCTATTGGTTAAAAAATGA  
 GCTGATTTAACAATAATTTAAGC  
 GAATTTTAACAATAATTTAAGCCTTACAATTTTCGCCTGTGTACCTTCTGAGGCGG  
 AAAGAACCAGCTGTGGAATGTGTGT  
 CAGTTAGGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGC  
 ATGCATCTCAATTAGTCAGCAACCAG  
 GTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGCATGCATCT  
 CAATTAGTCAGCAACCATAGTCCCGC  
 CCCTAACTCCGCCATCCCGCCCTAACTCCGCCAGTTCCGCCATTCTCCGCC  
 CCATGGCTGACTAATTTTTTTTATT  
 TATGCAGAGGCCGAGGCCGCTCGGCCTCTGAGCTATTCCAGAAGTAGTGAGGA  
 GGCTTTTTTGGAGGCCTAGGCTTTTG  
 CAAAAAGCTTGATTCTTCTGACACAACAGTCTCGAACTTAAGGCTAGAGCCACCA  
 TGATTGAACAAGATGGATTGCACGC  
 AGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTCGGCTATGACTGGGCACAACAG  
 ACAATCGGCTGCTCTGATGCCGCCG  
 TGTTCCGGCTGTGACGCGAGGGGCGCCCGGTTCTTTTTGTCAAGACCGACCTGTC  
 CGGTGCCCTGAATGAACTGCAGGAC  
 GAGGCAGCGCGGCTATCGTGGCTGGCCACGACGGGCGTTCTTGCGCAGCTGTG  
 CTCGACGTTGTCACTGAAGCGGGAAG  
 GGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACCTT  
 GCTCCTGCCGAGAAAGTATCCATCA  
 TGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGA  
 CCACCAAGCGAAACATCGCATCGAG  
 CGAGCACGTAATCGGATGGAAGCCGGTCTTGTGATCAGGATGATCTGGACGAA  
 GAGCATCAGGGGCTCGCGCCAGCCGA  
 ACTGTTCCGCCAGGCTCAAGGCGCGCATGCCCGACGGCGAGGATCTCGTCGTGAC  
 CCATGGCGATGCCTGCTTGCCGAATA  
 TCATGGTGGAAAAATGGCCGCTTTTCTGGATTTCATCGACTGTGGCCGGCTGGGTGT  
 GGCGGACCGCTATCAGGACATAGCG  
 TTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTCC  
 TCGTGCTTTACGGTATCGCCGCTCC  
 CGATTGCGAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGCGGGA  
 CTCTGGGGTTTCGAAATGACCGACCAAGCGACGCCAACCTGCCATCACGATGGC-

Figure 5B

CGCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAAGA.  
 TCCGCGTA-  
 TGGTGCACCTCTCAGTACAATCTGCTCTGATGCCGCATAGTTAAGCCAGCCCCGAC  
 ACCCGCCAACAC  
 CCGCTGACGCGCCCTGACGGGCTTGTCTGCTCCCGGCATCCGCTTACAGACAAGC  
 TGTGACCGTCTCCGGGAGCTGCATG  
 TGTGAGAGGTTTTACCGTCAACCGAAACGCGCGAGACGAAAGGGCCTCGTGA  
 TACGCCTATTTTTATAGGTTAATGT  
 CATGATAATAATGGTTTCTTAGACGTCAGGTGGCACTTTTCGGGGAAATGTGCGC  
 GGAACCCCTATTGTTTTATTTTTCT  
 AAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCTTCA  
 ATAATATTGAAAAAGGAAGAGTATG  
 AGTATTCAACATTTCCGTGTCGCCCTTATTCCCTTTTTTGCGGCATTTTGCCTTCC.  
 TGTTTTTGCTCACCCAGAAACGCT  
 GGTGAAAGTAAAAGATGCTGAAGATCAGTTGGGTGCACGAGTGGGTACATCGA  
 ACTGGATCTCAACAGCGGTAAGATCC  
 TTGAGAGTTTTCGCCCCGAAGAACGTTTTCCAATGATGAGCACTTTTAAAGTTCT  
 GCTATGTGGCGCGGTATTATCCCGT  
 ATTGACGCGCGGGCAAGAGCAACTCGGTGCGCGCATACACTATTCTCAGAATGACT  
 TGGTTGAGTACTCACCAGTCACAGA  
 AAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGCAGTGCTGCCATAACC  
 ATGAGTGATAAACAACGCGGCCAACT  
 TACTTCTGACAACGATCGGAGGACCGAAGGAGCTAACCGCTTTTTTGCACAACAT  
 GGGGGATCATGTAACTCGCCTTGAT  
 CGTTGGGAACCGGAGCTGAATGAAGCCATACCAAACGACGAGCGTGACACCAGC  
 ATGCCTGTAGCAATGGCAACAACGTT  
 GCGCAAATCTATTAAGTGGCGAACTACTTACTCTAGCTTCCCGGCAACAATTAATA  
 GACTGGATGGAGGCGGATAAAGTTG  
 CAGGACCACTTCTGCGCTCGGCCCTTCCGGCTGGCTGGTTTATTGCTGATAAATC  
 TGGAGCCGGTGAGCGTGGGTCTCGC  
 GGTATCATTGCAGCACTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTATCT  
 ACACGACGGGGAGTCAGGCAACTAT  
 GGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCATTGG  
 TAACTGTCAGACCAAGTTTACTCAT  
 ATATACTTTAGATTGATTTAAACTTTCATTTTTTAATTTAAAAGGATCTAGGTGAAG  
 ATCCTTTTTGATAATCTCATGACC  
 AAAATCCCTTAACGTGAGTTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAAAGA  
 TCAAAGGATCTTCTTGAGATCCTTT  
 TTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAACCACCGCTACCAGCGGTG  
 GTTTGTTTGCCGGATCAAGAGCTAC  
 CAACTCTTTTTCCGAAGGTAAGTGGCTTCAGCAGAGCGCAGATACCAAATACTGT  
 CCTTCTAGTGTAGCCGTAGTTAGGC  
 CACCACTTCAAGAACTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCCTGT  
 TACCAGTGGCTGCTGCCAGTGGCGA  
 TAAGTCGTGTCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAG  
 CGGTGCGGGCTGAACGGGGGGTTTCGT  
 GCACACAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTACAGC  
 GTGAGCTATGAGAAAGCGCCACGCTT  
 CCCGAAGGGAGAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAGG-

Figure 5C

AGAGCGCACGAGGGAGCTTCCAGGGGGAAAACGCCTGGTATCTTTATAGTCCTGTC  
GGGTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGG  
GGCGGAGCCTATGGAAAAACGCCAGCAAACGCGGCCTTTTTACGGTTCCTGGCCTT  
TTGCTGGCCTTTTGCTCACATGGCT  
CGAC3'

Figure 5D



5'AGATCTTCAATATTGGCCATTAGCCATATTATTTCATTGGTTATATAGCATAAATC  
 AATATTGGCTATTGGCCATTGCAT  
 ACGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAATATGACC  
 GCCATGTTGGCATTGATTATTGAC  
 TAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAG  
 TTCCGCGTTACATAACTTACGGTAA  
 ATGGCCCGCCTGGCTGACCGCCCAACGACCCCGCCCATTGACGTCAATAATGAC  
 GTATGTTCCCATAGTAACGCCAATA  
 GGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGG  
 CAGTACATCAAGTGTATCATATGCC  
 AAGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCC  
 CAGTACATGACCTTACGGGACTTTC  
 CTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTT  
 TTGGCAGTACACCAATGGGCGTGGA  
 TAGCGGTTTGGACTCACGGGGATTTCGAAGTCTCCACCCCATTGACGTCAATGGGA  
 GTTTGTTTTGGCACCAAAATCAACG  
 GGACTTTCCAAAATGTCTGTAACAACCTGCGATCGCCCGCCCCGTTGACGCAAATGG  
 GCGGTAGGCGTGTACGGTGGGAGGT  
 CTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCACTAGAAGCTTTATTGCG  
 GTAGTTTATCACAGTTAAATTGCTA  
 ACGCAGTCAGTGCTTCTGACACAACAGTCTCGAACTTAAGCTGCAGTGACTCTCT  
 TAATTAACCTCCACCAGTCTCACTTC  
 AGTTCCTTTTGCCTCCACCAGTCTCACTTCAGTTCCTTTTGCATGAAGAGCTCAGA  
 ATCAAAAGAGGAAACCAACCCCTA  
 AGATGAGCTTTCCATGTAAATTTGTAGCCAGCTTCCTTCTGATTTTCAATGTTTCT  
 TCCAAAGGTGCAGTCTCCAAAGAG  
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 TTCCTAGTTTTCAAATGAGTGATGA  
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 AGAAAAAGAGAAAGAGACTTTCAAGG  
 AAAAAGATACATATAAGCTATTTAAAAATGGAACCTCTGAAAATTAAGCATCTGAA  
 GACCGATGATCAGGATATCTACAAG  
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 AGATTCAAGAGAGGGTCTCAAAACC  
 AAAGATCTCCTGGACTTGTATCAACACAACCCTGACCTGTGAGGTAATGAATGGA  
 ACTGACCCCGAATTAAACCTGTATC  
 AAGATGGGAAACATCTAAACTTTCTCAGAGGGTCATCACACACAAGTGGACCAC  
 CAGCCTGAGTGCAAAATTCAAGTGC  
 ACAGCAGGGAACAAAGTCAGCAAGGAATCCAGTGTGAGCCTGTCAGCTGTCCA  
 GAGAAAGGGATCCCAGGTGAGTAGGG  
 CCCGATCCTTCTAGAGTCGAGCTCTCTTAAGGTAGCAAGGTTACAAGACAGGTTT  
 AAGGAGACCAATAGAAACTGGGCTT  
 GTCGAGACAGAGAAGACTCTTGCCTTCTGATAGGCACCTATTGGTCTEACGCGG  
 CCGCGAATTCCAAGCTTGAGTATTC  
 TATCGTGTACCTAAATAACTTGGCGTAATCATGGTCATATCTGTTTCCTGTGTGA  
 AATTGTTATCCGCTCACAATTCCA  
 CACAACATACGAGCCGGAAGCATAAAGTGTAAGCCTGGGGTGCCTAATGAGTG  
 AGCTAACTCACATTAATTGCGTTGCG  
 CGATGCTTCCATTTTGTGAGGGTTAATGCTTCGAGAAGACATGATAAGATACATT  
 GATGAGTTTGGACAAACCACAACAAGAATGCAGTGAAAAAATGCTTTATTTGT-

Figure 6A

GAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAA  
 CAAGTTAACAACAACAATTGCATTTCATTTTATGTTTCAGGTTTCAGGGGGAGATGT  
 GGGAGGTTTTTTTAAAGCAAGTAAAA  
 CCTCTACAAATGTGGTAAAATCCGATAAGGATCGATTCCGGAGCCTGAATGGCGA  
 ATGGACGCGCCCTGTAGCGGGCGCAT  
 TAAGCGCGGCGGGTGTGGTGGTTACGCGCACGTGACCGCTACACTTGCCAGCGC  
 CCTAGCGCCCGCTCCCTTCGCTTTCT  
 TCCCTTCCTTTCTCGCCACGTTCCGCCGGCTTTCCCCGTCAAGCTCTAAATCGGGG  
 GCTCCCTTTAGGGTTCCGATTTAGT  
 GCTTTACGGCACCTCGACCCCAAAAAAATTGATTAGGGTGATGGTTACGTTAGTG  
 GGCCATCGCCCTGATAGACGGTTTT  
 TCGCCCTTTGACGTTGGAGTCCACGTTCTTTAATAGTGGACTCTTGTTCCAAACTG  
 GAACAACACTCAACCCTATCTCGG  
 TCTATTCTTTTGATTATAAGGGATTTTGCCGATTTCCGGCCTATTGGTTAAAAAAT  
 GAGCTGATTTAACAAAAATTTAAC  
 GCGAATTTTAACAAAAATTTAACGCTTACAATTTCCGCTGTGTACCTTCTGAGGC  
 GGAAAGAACCAGCTGTGGAATGTGT  
 GTCAGTTAGGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAA  
 GCATGCATCTCAATTAGTCAGCAACC  
 AGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGCATGCAT  
 CTCATTAGTCAGCAACCATAGTCCC  
 GCCCTAACTCCGCCCATCCCGCCCTAACTCCGCCCAGTTCCGCCCATCTCTCCG  
 CCCCATGGCTGACTAATTTTTTTTA  
 TTTATGCAGAGGCCGAGGCCGCTCGGCCTCTGAGCTATTCCAGAAGTAGTGAGG  
 AGGCTTTTTTTGGAGGCCTAGGCTTT  
 TGCAAAAAGCTTGATTCTTCTGACACAACAGTCTCGAACTTAAGGCTAGAGCCAC  
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 GCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTCCGGCTATGACTGGGCACAAC  
 AGACAATCGGCTGCTCTGATGCCGC  
 CGTGTTCCGGCTGTGACGCGAGGGGCGCCCGGTTCTTTTTGTCAAGACCGACCTG  
 TCCGGTGCCCTGAATGAACTGCAGG  
 ACGAGGCAGCGCGGCTATCGTGGCTGGCCACGACGGGCGTTCTTGCGCAGCTG  
 TGCTCGACGTTGTCACTGAAGCGGGA  
 AGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACC  
 TTGCTCCTGCCGAGAAAGTATCCAT  
 CATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCT  
 GACCACCAAGCGAAACATCGCATCG  
 AGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGACG  
 AAGAGCATCAGGGGCTCGCGCCAGCC  
 GAACTGTTCCGCCAGGCTCAAGGCGCGCATGCCCGACGGCGAGGATCTCGTCGTG  
 ACCCATGGCGATGCCTGCTTGCCGAA  
 TATCATGGTGGAATAATGGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGT  
 GTGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGC  
 TTGGCGGCGAATGGGCTGACCGCTTCTCTGCTTTACGGTATCGCCGCT  
 CCCGATTCGCAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGCGG  
 GACTCTGGGGTTGCAAATGACCGAC  
 CAAGCGACGCCCAACCTGCCATCACGATGGCCGCAATAAAATATCTTTATTTTCA  
 TTACATCTGTGTGTTGGTTTTTTGT  
 GTGAAGATCCGCGTATGGTGCATCTCAGTACAATCTGCTCTGATGCCGCATAGT  
 TAAGCCAGCCCCGACACCCGCCAACACCCGCTGACGCGCCCTGACGGGCT-

Figure 6B

TGTCTGCTCCCGGCATCCGCTTACAGACAAGCTGTGACCGTCTCCGGGAGCTGCA  
 TGTGTCAGAGGTTTTTCACCGTCATCACCGAAACGCGCGAGACGAAAGGGCCTCGT  
 GATACGCCTATTTTTATAGGTTAAT  
 GTCATGATAATAATGGTTTCTTAGACGTCAGGTGGCACTTTTCGGGGAAATGTGC  
 GCGGAACCCCTATTTGTTTATTTT  
 CTAAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCCTGATAAATGCTT  
 CAATAATATTGAAAAAGGAAGAGTA  
 TGAGTATTCAACATTTCCGTGTGCGCCCTTATTECCCTTTTTTGCGGCATTTTGCCTT  
 CCTGTTTTTGCTCACCCAGAAACG  
 CTGGTGAAAGTAAAAGATGCTGAAGATCAGTTGGGTGCACGAGTGGGTACATC  
 GAACTGGATCTCAACAGCGGTAAGAT  
 CCTTGAGAGTTTTTCGCCCCGAAGAACGTTTTCCAATGATGAGCACTTTTAAAGTT  
 CTGCTATGTGGCGCGGTATTATCCC  
 GTATTGACGCCGGGCAAGAGCAACTCGGTGCGCGCATACACTATTCTCAGAATGA  
 CTTGGTTGAGTACTCACCAGTCACA  
 GAAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGCAGTGCTGCEATAA  
 CCATGAGTGATAACACTGCGGCCAA  
 CTTACTTCTGACAACGATCGGAGGACCGAAGGAGCTAACCGCTTTTTTGACACAAC  
 ATGGGGGATCATGTAACCTCGCCTTG  
 ATCGTTGGGAACCGGAGCTGAATGAAGCCATACCAAACGACGAGCGTGACACCA  
 CGATGCCTGTAGCAATGGCAACAACG  
 TTGCGCAAACCTATTAACCTGGCGAACTACTTACTCTAGCTTCCCGGCAACAATTAA  
 TAGACTGGATGGAGGCGGATAAAGT  
 TGCAAGGACCACTTCTGCGCTCGGCCCTTCCGGCTGGCTGGTTTATTGCTGATAAA  
 TCTGGAGCCGGTGAGCGTGGGTCTC  
 GCGGTATCATTGCAGCACTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTAT  
 CTACACGACGGGGAGTCAGGCAACT  
 ATGGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCATT  
 GGTAACCTGTCAGACCAAGTTTACTC  
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 AGATCCTTTTTTGATAATCTCATGA  
 CAAAATCCCTTAACGTGAGTTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAAA  
 GATCAAAGGATCTTCTTGAGATCCT  
 TTTTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAAACCACCGCTACCAGCGG  
 TGGTTTGTGTTGCCGGATCAAGAGCT  
 ACCAACTCTTTTTCCGAAGGTAACTGGCTTCAGCAGAGCGCAGATACCAAATACT  
 GTCCCTTCTAGTGTAGCCGTAGTTAG  
 GCCACCACTTCAAGAACTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCCT  
 GTTACCAGTGGCTGCTGCCAGTGGCGATAAGTCGTGTCTTACCGGGTTGGACTCA  
 AGACGATAGTTACCGGATAAGGCGCAGCGGTGCGGCTGAACGGGGGGTTC  
 GTGCACACAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACTTACA  
 GCGTGAGCTATGAGAAAGCGCCACGC  
 TTCCCGAAGGGAGAAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAG  
 GAGAGCGCACGAGGGAGCTTCCAGGG  
 GGAAACGCCTGGTATCTTTATAGTCCTGTGCGGGTTTCGCCACCTCTGACTTGAGC  
 GTCGATTTTTGTGATGCTCGTCAGG  
 GGGGCGGAGCCTATGGAAAAACGCCAGCAACGCGGCCCTTTTACGGTTCCTGGC  
 CTTTTGCTGGCCTTTTGCTCACATGG  
 CTCGAC3'

Figure 6C

5'AGATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAAATC  
 AATATTGGCTATTGGCCATTGCAT  
 ACGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAATATGACC  
 GCCATGTTGGCATTGATTATTGAC  
 TAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAG  
 TTCCGCGTTACATAACTTACGGTAA  
 ATGGCCCGCCTGGCTGACCGCCCAACGACCCCGCCCATTGACGTCAATAATGAC  
 GTATGTTCCCATAGTAACGCCAATA  
 GGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGG  
 CAGTACATCAAGTGTATCATATGCC  
 AAGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCC  
 CAGTACATGACCTTACGGGACTTTC  
 CTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTT  
 TTGGCAGTACACCAATGGGCGTGGA  
 TAGCGGTTTGACTCACGGGGATTTCCTCAAGTCTCCACCCCATTGACGTCAATGGGA  
 GTTGTGTTTGGCACCAAAATCAACG  
 GGACTTTCCAAAATGTCTGTAACAACTGCGATCGCCCGCCCGTTGACGCAAATGG  
 GCGGTAGGCGTGTACGGTGGGAGGT  
 CTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCACTAGAAGCTTTATTGCG  
 GTAGTTTATCACAGTTAAATTGCTA  
 ACGCAGTCAGTGCTTCTGACACAACAGTCTCGAACTTAAGCTGCAGTGACTCTCT  
 TAATTAACCTCCACCAGTCTCACTTC  
 AGTTCCTTTTGCCTCCACCAGTCTCACTTCAGTTCCTTTTGCATGAAGAGCTCAGA  
 ATCAAAAGAGGAAACCAACCCCTA  
 AGATGAGCTTTCCATGTAAATTTGTAGCCAGCTTCCTTCTGATTTTCAATGTTTCT  
 TCCAAAGGTGCAGTCTCCAAAGAG  
 ATTACGAATGCCTTGGAAACCTGGGGTGCCTTGGGTCAGGACATCAACTTGGACA  
 TTCCTAGTTTTCAAATGAGTGATGA  
 TATTGACGATATAAAATGGGAAAAAACTTCAGACAAGAAAAAGATTGCACAATTC  
 AGAAAAAGAGAAAGAGACTTTCAAGG  
 AAAAAGATACATATAAGCTATTTAAAAATGGAACCTCTGAAAATTAAGCATCTGAA  
 GACCGATGATCAGGATATCTACAAG  
 GTATCAATATATGATACAAAAGGAAAAAATGTGTTGGAAAAAATATTTGATTTGA  
 AGATTCAAGAGAGGGTCTCAAAACC  
 AAAGATCTCCTGGACTTGTATCAACACAACCCTGACCTGTGAGGTAATGAATGGA  
 ACTGACCCCGAATTAAACCTGTATC  
 AAGATGGGAAACATCTAAAACCTTCTCAGAGGGTCATCACACACAAGTGGACCAC  
 CAGCCTGAGTGCAAAATTCAAGTGC  
 ACAGCAGGGAACAAAGTCAGCAAGGAATCCAGTGTCGAGCCTGTCAGCTGTCCA  
 GAGAAAGGGATCCACAGGTGAGTAGG  
 GCCCGATCCTTCTAGAGTCGAGCTCTCTTAAGGTAGCAAGGTTACAAGACAGGTT  
 TAAGGAGACCAATAGAAACTGGGCT  
 TGTCGAGACAGAGAAGACTCTTGCGTTTCTGATAGGCACCTATTGGTCTTACGCG  
 GCCGCGAATTCCAAGCTTGAGTATT  
 CTATCGTGTACCTAAATAACTTGGCGTAATCATGGTCATATCTGTTTCCTGTGTG  
 AAATTGTTATCCGCTCACAATTCC  
 ACACAACATACGAGCCGGAAGCATAAAGTGTAAGCCTGGGGTGCCTAATGAGT  
 GAGCTAACTCACTTAATTGCGTTGC  
 GCGATGCTTCCATTTTGTGAGGGTTAATGCTTCGAGAAGACATGATAAGATACAT  
 TGATGAGTTTGGACAAACCACAACA AGAATGCAGTGAAAAAAATGC-

Figure 7A

TTTATTTGTGAAATTTGTGATG  
 CTATTGCTTTTATTTGTAAACCATTATAAGCTGCAATAA  
 ACAAGTTAACAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGGAGATG  
 TGGGAGGTTTTTTTAAAGCAAGTAAA  
 ACCTCTACAAATGTGGTAAAAATCCGATAAGGATCGATTCCGGAGCCTGAATGGCG  
 AATGGACGCGCCCTGTAGCGGCGCA  
 TTAAGCGCGGCGGGTGTGGTGGTTACGCGCACGTGACCGCTACACTTGCCAGCGC  
 CCTAGCGCCCGCTCCITTCGCTTTC  
 TTCCCTTCCTTTCTCGCCACGTTCCGCCGGCTTTCCCGTCAAGCTCTAAATCGGGG  
 GCTCCCTTTAGGGTTCCGATTTAG  
 TGCTTTACGGCACCTCGACCCCAAAAACCTTGATTAGGGTGATGGTTTACGTAGT  
 GGGCCATCGCCCTGATAGACGGTTT  
 TTCGCCCTTTGACGTTGGAGTCCACGTTCTTTAATAGTGGACTCTTGTTCCAAACT  
 GGAACAACACTCAACCCTATGTCG  
 GTCTATTCTTTTGATTATAAGGGATTTTGCCGATTTCCGGCCTATTGGTTAAAAAA  
 TGAGCTGATTTAACA AAAAATTTAA  
 CGCGAATTTTAACAAAATATTAACGCTTACAATTTTCGCCTGTGTACCTTCTGAGG  
 CGGAAAGAACCAGCTGTGGAATGTG  
 TGTCAGTTAGGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAAGTATGCAA  
 AGCATGCATCTCAATTAGTCAGCAAC  
 CAGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAAGTATGCAAAGCATGCA  
 TCTCAATTAGTCAGCAACCATAGTCC  
 CGCCCCTAACCTCCGCCCATCCCGCCCCCTAACTCCGCCCAGTTCCGCCCATTTCTCC  
 GCCCATGGCTGACTAATTTTTTTT  
 ATTTATGCAGAGGCCGAGGCCGCTCGGCCTCTGAGCTATTCCAGAAGTAGTGAG  
 GAGGCTTTTTTTGGAGGCCCTAGGCTT  
 TTGCAAAAAGCTTGATTCTTCTGACACAACAGTCTCGAACTTAAGGCTAGAGCCA  
 CCATGATTGAACAAGATGGATTGCA  
 CGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTCCGGCTATGACTGGGCACAA  
 CAGACAATCGGCTGCTCTGATGCCG  
 CCGTGTTCGGGCTGTGACGCGCAGGGGCGCCCGGTTCTTTTTGTCAAGACCGACCT  
 GTCCGGTGCCCTGAATGAACTGCAG  
 GACGAGGCAGCGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCCTTGCGCAGCT  
 GTGCTCGACGTTGTCACTGAAGCGGG  
 AAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCAC  
 CTTGCTCCTGCCGAGAAAGTATCCA  
 TCATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGGCCATT  
 CGACCACCAAGCGAAACATCGCATC  
 GAGCGAGCACGTA CTGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGAC  
 GAAGAGCATCAGGGGCTCGCGCCAGC  
 CGAACTGTTCCGCCAGGCTCAAGGCGCGCATGCCCGACGGCGAGGATCTCGTCGT  
 GACCCATGGCGATGCCTGCTTGCCGA  
 ATATCATGGTGGAAAATGGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGG  
 TGTGGCGGACCGCTATCAGGACATA  
 GCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCT  
 TCCTCGTGCTTTACGGTATCGCCG  
 TCCCGATTTCGACGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGCG  
 GGA CTCTGGGGTTTCGAAATGACCGA  
 CCAAGCGACGCCCAACCTGCCATCACGATGGCCGCAATAAAATATCTTTATTTTC  
 ATTACATCTGTGTGTTGGTTTTTTGTGTGAAGATCCGCGTATGGTGCACTCTC-

Figure 7B

AGTACAATCTGCTCTGATGCCGCATAGTTAAGCCAGCCCCGACACCCGCCAA  
 CACCCGCTGACGCGCCCTGACGGGCTTGTCTGCTCCCGGCATCCGCTTACAGACA  
 AGCTGTGACCGTCTCCGGGAGCTGC  
 ATGTGTCAGAGGTTTTACCGTCATCACCGAAACGCGCGAGACGAAAGGGCCTCG  
 TGATACGCCTATTTTTATAGGTTAA  
 TGTCATGATAATAATGGTTTCTTAGACGTCAGGTGGCACTTTTCGGGGAAATGTG  
 CGCGGAACCCCTATTTGTTTATTTT  
 TCTAAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCT  
 TCAATAATATTGAAAAAGGAAGAGT  
 ATGAGTATTCAACATTTCCGTGTGCGCCCTTATTCCCTTTTTTGCGGCATTTTGCCT  
 TCCTGTTTTTGTCTACCCAGAAAC  
 GCTGGTGAAAGTAAAAGATGCTGAAGATCAGTTGGGTGCACGAGTGGGTACAT  
 CGAACTGGATCTCAACAGCGGTAAGA  
 TCCTTGAGAGTTTTTCGCCCCGAAGAACGTTTTCCAATGATGAGCACTTTTAAAGT  
 TCTGCTATGTGGCGCGGTATTATCC  
 CGTATTGACGCGGGCAAGAGCAACTCGGTGCGCCGCATACACTATTCTCAGAATG  
 ACTTGGTTGAGTACTCACCGATCAC  
 AGAAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGCAGTGCTGCCATA  
 ACCATGAGTGATAACACTGCGGCCA  
 ACTTACTTCTGACAACGATCGGAGGACCGAAGGAGCTAACCGCTTTTTTGCACAA  
 CATGGGGGATCATGTAACCTCGCCTT  
 GATCGTTGGGAACCGGAGCTGAATGAAGCCATACCAAACGACGAGCGTGACACC  
 ACGATGCCTGTAGCAATGGCAACAAC  
 GTTGCGCAAACTATTAAGTGGCGAACTACTTACTCTAGCTTCCCGGCAACAATTA  
 ATAGACTGGATGGAGGCGGATAAAG  
 TTGCAGGACCACTTCTGCGCTCGGCCCTTCCGGCTGGCTGGTTTATTGCTGATAA  
 ATCTGGAGCCGGTGAGCGTGGGTCT  
 CGCGGTATCATTGCAGCACTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTA  
 TCTACACGACGGGGAGTCAGGCAAC  
 TATGGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCAT  
 TGGTAACTGTCAGACCAAGTTTACT  
 CATATATACTTTAGATTGATTTAAAACTTCATTTTTTAATTTAAAAGGATCTAGGTG  
 AAGATCCTTTTTGATAATCTCATG  
 ACCAAAATCCCTTAACGTGAGTTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAA  
 AGATCAAAGGATCTTCTTGAGATCC  
 TTTTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAAACCACCGCTACCAGCG  
 GTGGTTTGTGTTGCCGGATCAAGAGC  
 TACCAACTCTTTTTCCGAAGGTAAGTGGCTTCAGCAGAGCGCAGATACCAAATAC  
 TGTCCTTCTAGTGTAGCCGTAGTTA  
 GGCCACCACTTCAAGAACTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCC  
 TGTTACCAGTGGCTGCTGCCAGTGG  
 CGATAAGTCGTGTCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGCG  
 CAGCGGTCGGGCTGAACGGGGGGTT  
 CGTGACACAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTAC  
 AGCGTGAGCTATGAGAAAGCGCCACGCTTCCCGAAGGGAGAAAGGCGGACAGGT  
 ATCCGGTAAGCGGCAGGGTCGGAACAGGAGAGCGCACGAGGGAGCTTCCAGG  
 GGGAAACGCCTGGTATCTTTATAGTCCTGTGCGGTTTCGCCACCTCTGACTTGAG  
 CGTCGATTTTTGTGATGCTCGTCAG  
 GGGGGCGGAGCCTATGGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCCTGG  
 CCTTTTGCTGGCCTTTTGCTCACATGGCTCGAC3'

Figure 7C

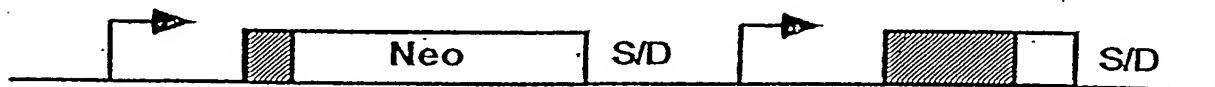
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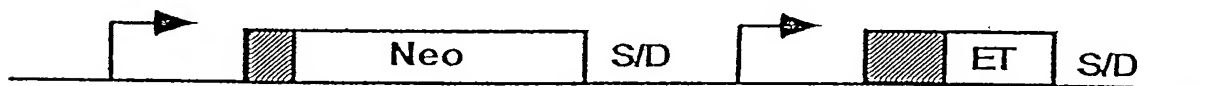
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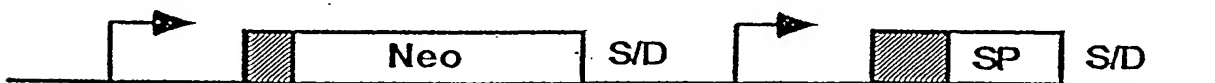
C



D



E



F



FIGURE 8

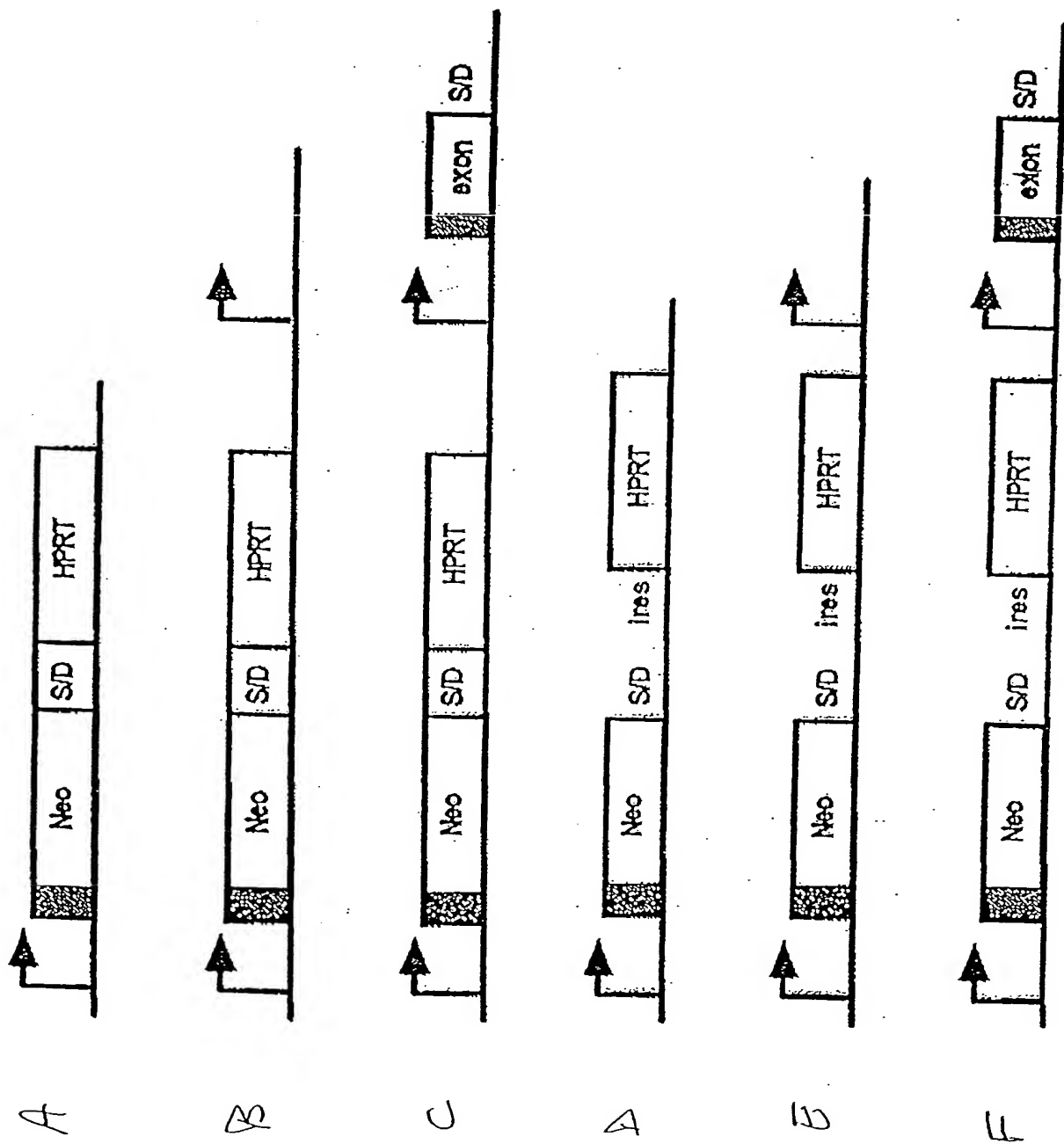


FIGURE 9



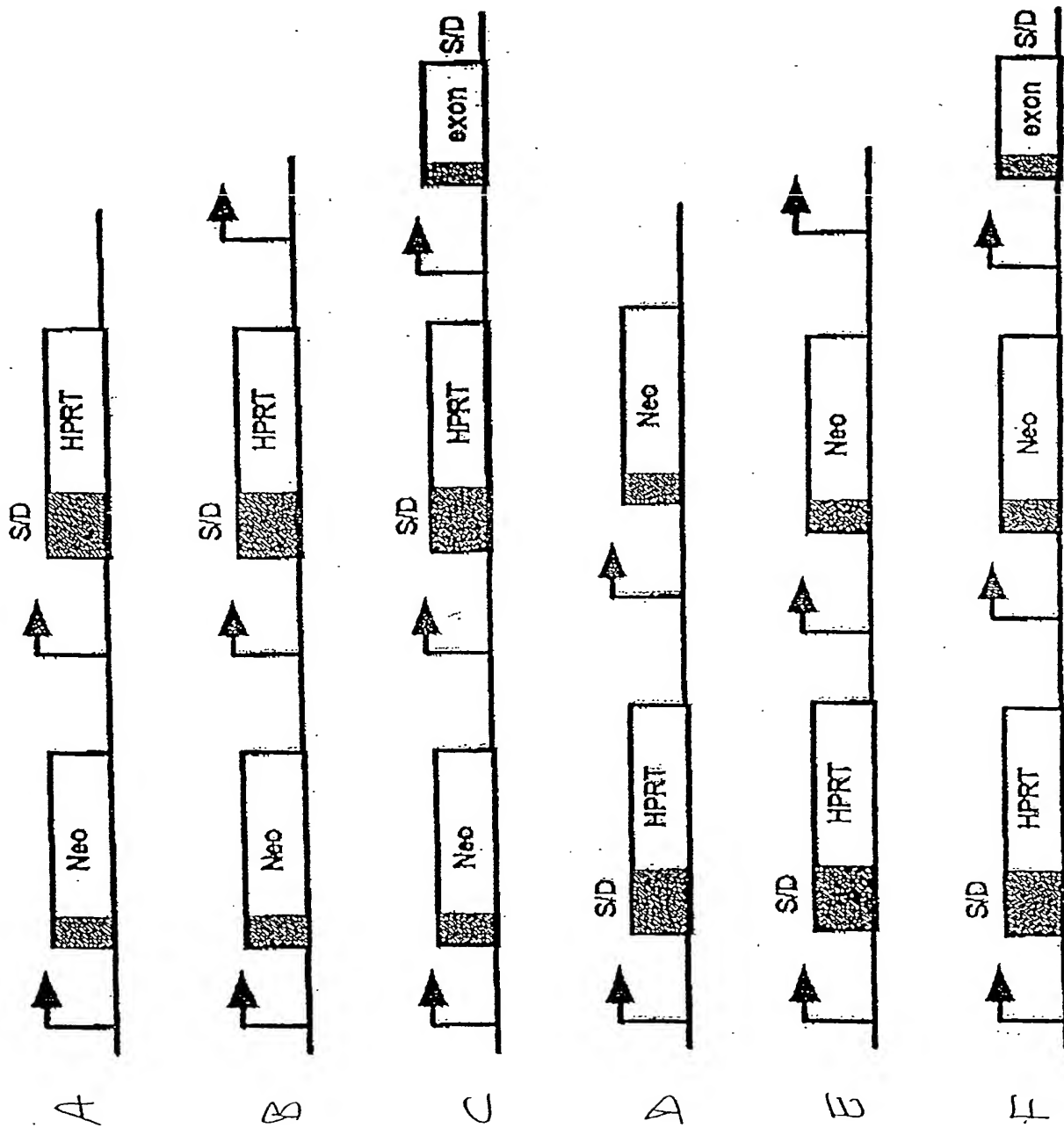


FIGURE 10

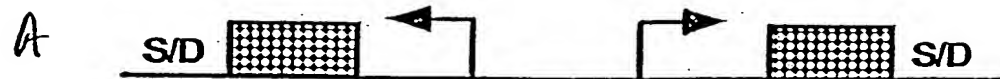


FIGURE 11

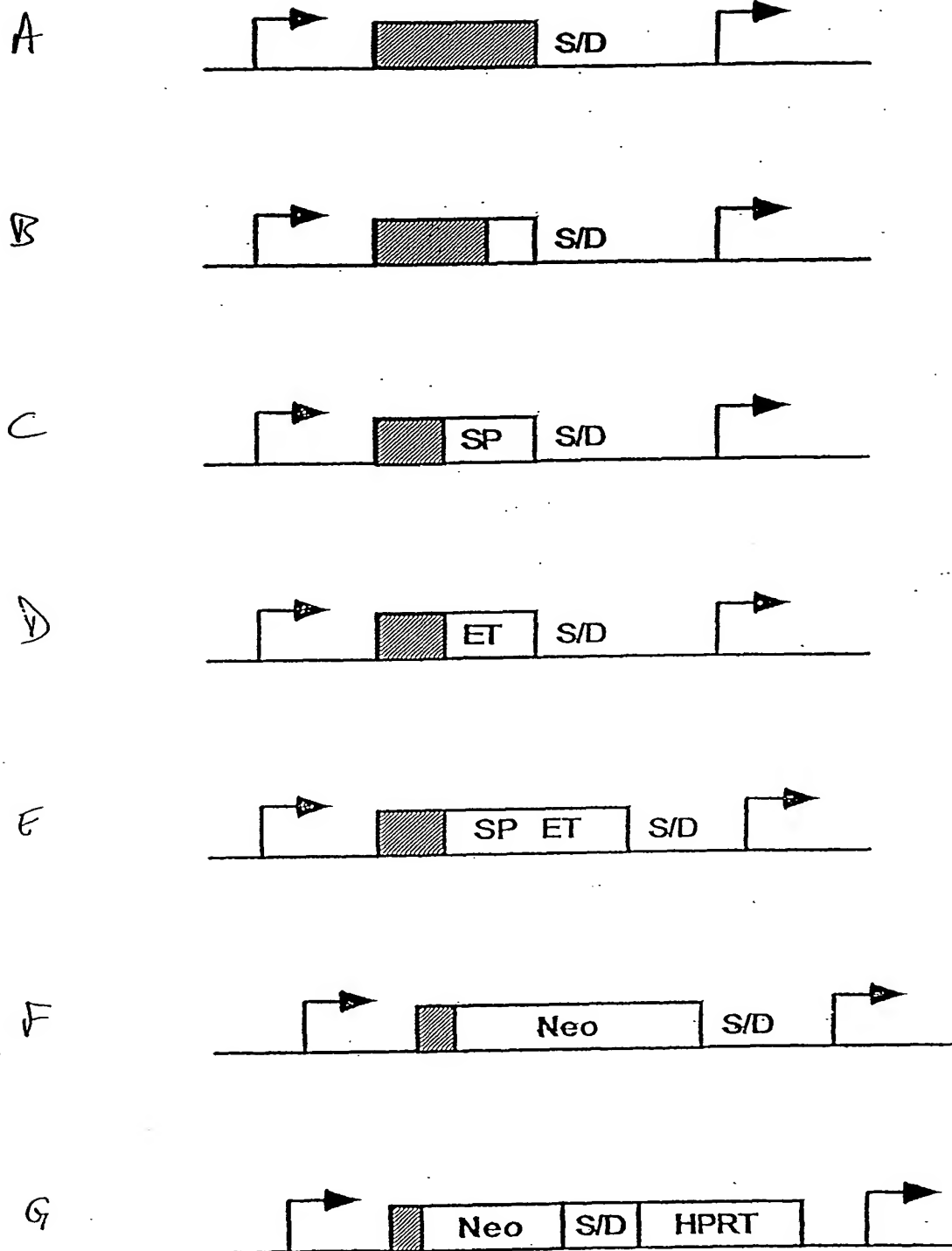


FIGURE 12

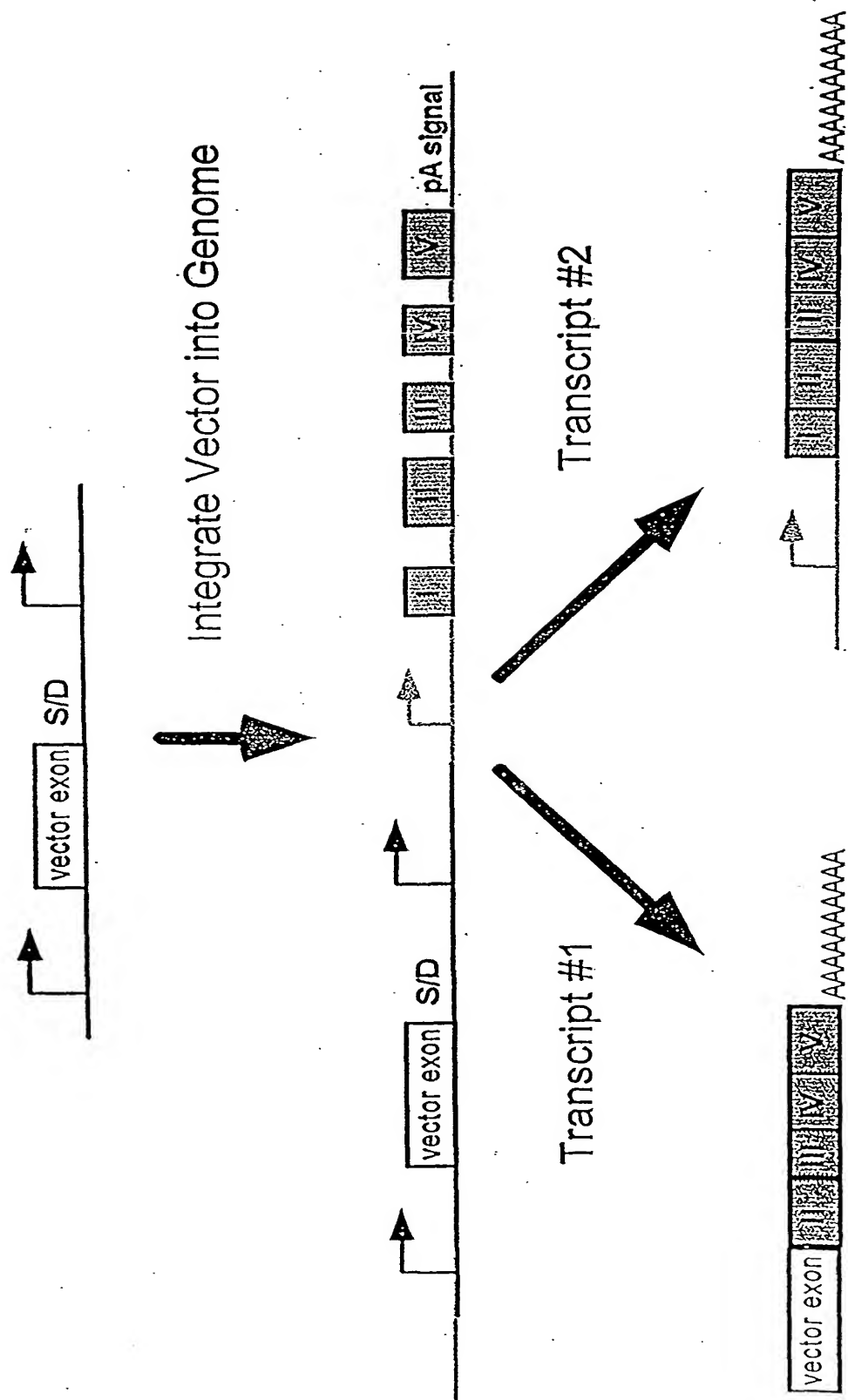


FIGURE 13

AGATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAATCAATATTGG  
CTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCA  
ATATGACCGCCATTGTTGGCATTGATTATTGACTAGTTATTAATAGTAATCAATTACGGGGTCA  
TTAGTTTCATAGCCCATATATGGAGTTCCGCGTTACATAAATTACGGTAAATGGCCCGCCTGGC  
TGACCGCCCAACGACCCCGCCCATTTGACGTCAATAATGACGTATGTTCCCATAGTAACGCCA  
ATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGGCAGTA  
CATCAAGTGTATCATATGCCAAGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCC  
TGGCATTATGCCCAGTACATGACCTTACGGGACTTTCTACTTGGCAGTACATCTACGTATTA  
GTCATCGCTATTACCATGGTGATGCGGTTTTGGCAGTACACCAATGGGCGTGGATAGCGGTTT  
GACTCACGGGGATTTCCAAAGTCTCCACCCCATTTGACGTCAATGGGAGTTTGTTTTGGCACCAA  
AATCAACGGGACTTTCCAAAATGTCTGAACAACCTGCGATCGCCCGCCCGTTGACGCAAATG  
GGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGAT  
CACTAGAAGCTTTATTGCGGTAGTTTATCACAGTTAAATTGCTAACGCAGTCAGTGTCTCTGA  
CACAACAGTCTCGAACTTAAGCTGCAGTGACTCTCTTAAATccaccatggctacaggtgagtactcgGATCTA  
GGCTATATGCGTTGATGCAATTTCTATGCGCACCCGTTCTCGGAGCACTGTCCGACCGCTTT  
GGCCGCGCCAGTCTGCTGCTGCTTCTACGCGGACGCATCGTGGCCGGCATCACCGGCGCCACA  
ACCAACCCGTCCTGTGGATCCTCTACGCGGACGCATCGTGGCCGGCATCACCGGCGCCACA  
GGTGCGGTTGCTGGCGCTATATCGCGACATACCGGATGGGGAAGATCGGGCTCGGCACTTC  
GGGCTCATGAGCGCTTGTTCGGCTCTCTTAAGGTAGCAGATCCTTGCTAGAGTCCGACCAATT  
CTCATGTTTGACAGCTTATCATCGCAGATCCTGAGCTTGTATGGTGCACCTCTCAGTACAATCT  
GCTCTGCTGCCGCATAGTTAAGCCAGTATCTGCTCCCTGCTTGTGTGTTGGAGTCTGCTGAGT  
AGTGC CGGAGCAAAAATTTAAGCTACAACAAGGCAAGGCTTGACCGACAATTGCATGAAGAAT  
CTGCTTAGGGTTAGGCGTTTTGCGCTGCTTCGCGATGTACGGGCCAGATATACGCGTATCTGA  
GGGGACTAGGGTGTGTTTAGGCGCCCAGCGGGGCTTCGGTTGTACGCGGTTAGGAGTCCCCTC  
AGGATATAGTAGTTTCGCTTTTGCATAGGGAGGGGGAATGTAGTCTTATGCAATACACTTGT  
AGTCTTGCAACATGGTAACGATGAGTTAGCAACATGCCTTACAAGGAGAGAAAAAGCACCGT  
GCATGCCGATTGGTGGAAGTAAGGTGGTACGATCGTGCCTTATTAGGAAGGCAACAGACAGG  
TCTGACATGGATTGGACGAACCACTGAATTCCGCATTGCAGAGATAATTGTATTAAAGTGCCT  
AGCTCGATACAATAAACGCCATTTGACCATTACCACATTGGTGTGCACCTCCAAGCTGGGTA  
CCAGCTGCTAGCCTCGAGACGCGTGATTTCCCTTCGAAGCTTgtcatggttggttcgctaactgcatcgctgtgtc  
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tgagaagaatgattaatCGATCTTAAGTTTAATCTTTCCCGGGGGTACCGTCGACTGCGGCGCGAATTC  
CAAGCTTGAGTATTCTATCGTGTACCTAAATAACTTGGCGTAATCATGGTTCATATCTGTTTCC  
TGTGTGAAATTGTTATCCGCTCACAATTCACACAACATACGAGCCGGAAGCATAAAGTGTA  
AAGCCTGGGGTGCCTAATGAGTGAGCTAACTCACATTAATTGCGTTGCGCGATGCTTCCATTT  
TGTGAGGGTTAATGCTTCGAGAAGACATGATAAGATACATTGATGAGTTTGGACAAACCACA  
ACAAGAATGCAGTGAAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTA  
ACCATTATAAGCTGCAATAAACAAAGTTAACAACAACAATTGCATTCATTTTATGTTTCAGGTT  
CAGGGGGAGATGTGGGAGGTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTAAAATCCG  
ATAAGGATCGATTCCGGAGCCTGAATGGCGAATGGACGCGCCCTGTAGCGGCGCATTAAAGCG  
CGGCGGGTGTGGTGGTTACGCGCACGTGACCGCTACACTTGCCAGCGCCCTAGCGCCCGCTCC  
TTTCGCTTTCCTTCCCTTCTCGCCACGTTCCCGGCTTTCCCGTCAAGCTCTAAATCGG  
GGGCTCCCTTTAGGGTTCCGATTTAGTCTTTACGGCACCTCGACCCCAAAAAAATTGATTAG  
GGTGTGAGTTTACGTFAGTGGGCCATCGCCCTGATAGACGGTTTTTTCGCCCTTTGACGTTGGAG  
TCCACGTTCTTTAATAGTGGACTCTTGTTCCAAACCTGGAACAACACTCAACCCTATCTCGGTC  
TATTCTTTTGATTTATAAGGGATTTTGGCGATTTCGGCCTATTGGTTAAAAAATGAGCTGATTT  
AACAAAAATTTAACGCGAATTTTAAACAAAATATTAACGCTTACAATTTTCGCCTGTGTACCTTC  
TGAGGCGGAAAGAACCAGCTGTGGAATGTGTGTGAGTTAGGGTGTGGAAAGTCCCCAGGCTC  
CCCAGCAGGCAGAAAGTATGCAAAGCATGCATCTCAATTAGTCAGCAACCAGGTGTGGAAAGT  
CCCCAGGCTCCCCAGCAGGCAGAAAGTATGCAAAGCATGCATCTCAATTAGTCAGCAACCATA-

FIGURE 14A

GTCCCGCCCCCTAACTCCGCCCCATCCCGCCCCCTAACTCCGCCCCAGTTCCGCCCCATTCTCCGCCCC  
ATGGCTGACTAATTTTTTTTATTTATGTCAGAGGCGGAGGCGGCTCGGCTCTGAGCTATTCC  
AGAAGTAGTGAGGAGGCTTTTTTGGAGGGCTAGGGCTTTTGCAAAAAGCTTGATTCCTTCTGACA  
CAACAGTCTCGAACTTAAGGCTAGAGCCACCATGATTGAACAAGATGGATTGCACGCAGGTT  
CTCCGGCCGCTTGGGTGGAGAGGCTATTCCGGCTATGACTGGGCACAAACAGACAATCCGGCTGC  
TCTGATGCCGCCGTGTCCGGCTGTCAAGCGCAGGGGCGCCCGGTTCTTTTGTCAAGACCGAC  
CTGTCCGGGTGCCCTGAATGAACTGACAGGACGAGGCGAGCGGGCTATCGTGGCTGGCCACGAC  
GGGCGTTCCCTTGCAGAGCTGTGCTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATT  
GGGCGAAGTGCCGGGGCAGGATCTCCTGTCTCTCACCTTGCTCCTGCCGAGAAAGTATCCAT  
CATGGCTGATGCAATGCGGGCGGCTGCATAAGCTTGATCCGGCTACCTGCCATTCCGACCACCA  
AGCGAAACATCGCATCGAGCGAGCACGTAACGGATGGAAGCCGGTCTTGTCGATCAGGATG  
ATCTGGACGAAGAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCCGCCAGGCTCAAGGCGCGC  
ATGCCCGACGGCGAGGATCTCGTCTGTGACCCATGGCGATGCCGTGCTTGCCGAATATCATGGTG  
GAAAATGGCCGCTTTTTCTGGATTTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAG  
GACATAGCGTTGGCTACCCGCTGATATTGCTGAAGAGCTTGCGCGCGAATGGGCTGACCGCTTC  
CTGTGCTTTACGGTATCGCCGCTCCCGATTCCGAGCGCATCGCCTTCTATCGCCTTCTTGACG  
AGTTCTTCTGAGCGGGACTCTGGGGTTCGAAATGACCGACCAAGCGACGCCAACCTGCCAT  
CACGATGGCCGCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTGTGTGGAAG  
ATCCGCGTATGGTGCACCTCTCAGTACAATCTGCTCTGATGCCGCATAGTTAAGCCAGCCCCGA  
CACCCGCCAACACCCGCTGACCGCGCCTGACGGGCTTGTCTGCTCCCGGCATCCGCTTACAGA  
CAAGCTGTGACCGTCTCCGGGAGCTGCATGTGTGAGAGGTTTTACCGTCTATCACCAGAACGCG  
GCGAGACGAAAGGGCCTCGTGATAACGCTATTTTTATAGGTTAATGTCATGATAATAATGGTT  
TCTTAGACGTCAGGTGGCACTTTTCGGGGAAATGTGCGCGGAACCCCTATTTGTTATTTTTCT  
AAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCCTGATAAATGCTTCAATAATATT  
GAAAAAGGAAGAGTATGAGTATTCAACATTTCCGTGTCCGCTTATCCCTTTTTTGCGGCAT  
TTTGCTTCTGTTTTTGTCTACCCAGAAACGCTGGTGAAAGTAAAGATGCTGAAGATCAGT  
TGGGTGCACGAGTGGGTTACATCGAACTGGATCTCAACAGCGGTAAGATCCTTGAGAGTTTTT  
GCCCGAAGAACGTTTTCCAATGATGAGCACTTTTAAAGTTCTGCTATGTGGCGCGGTATTAT  
CCCGTATTGACCCGGGCAAGAGCAACTCGGTCCGGCATACTATTCTCAGAAATGACTTGG  
TTGAGTACTCACAGTACAGAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGC  
AGTGCTGCCATAACCATGAGTGATAACACTGCGGCCAACTTACTTCTGACAACGATCCGAGG  
ACCGAAGGAGCTAACCGCTTTTTTGCACAACATGGGGGATCATGTAACCTCGCCTTGATCGTTG  
GGAACCGGAGCTGAATGAAGCCATAACAAACGACGAGCGTGACACCAGATGCCTGTAGCAA  
TGGAACAACGTTGCGCAAACTATTAAGTGGCGAACTACTTACTCTAGCTTCCCGGCAACAAT  
TAATAGACTGGATGGAGGCGGATAAAGTTGCGAGGACCACTTCTGCGCTCGGCCCTTCCGGCT  
GGCTGGTTTATTGCTGATAAATCTGGAGCCGGTGAGCGTGGGTCTCGCGGTATCATTGCAGCA  
CTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTATCTACACGACGGGGAGTCAGGCAAC  
TATGGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAAGCATTGGTAAC  
TGTCAGACCAAGTTTACTCATATATACTTTAGATTGATTTAAACTTCATTTTTAATTTAAAG  
GATCTAGGTGAAGATCCTTTTTGATAATCTCATGACCAAAATCCCTTAACGTGAGTTTTCTGTT  
CCACTGAGCGTCAGACCCCGTAGAAAAAGATCAAAGGATCTTCTTGAGATCCTTTTTTCTGCG  
CGTAATCTGCTGCTTGCAAAACAAAAAACACCGCTACCAGCGGTGGTTTGTGTTGCCGGATCA  
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CCTTCTAGTGTAGCCGTAGTTAGGCCACCACTTCAAGAACTCTGTAGCACCGCCTACATACCT  
CGCTCTGCTAATCCTGTTACCAAGTGGCTGCTGCCAGTGGCGATAAGTCGTGTCTTACCGGGTT  
GGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTCGGGCTGAACGGGGGGTTCTGTGA  
CACAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCTATGA  
GAAAGCGCCACGCTTCCCGAAGGGAGAAAGGCGGACAGGTATCCGTAAGCGGCAGGGTCG  
GAACAGGAGAGCGCACGAGGGAGCTTCCAGGGGGAAACGCCTGGTATCTTTATAGTCTGTGTC  
GGGTTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGGGGGCGGAGCCTA  
TGGA AAAACGCCAGCAACGCGGCCTTTTTACGGTTCTTGGCCTTTTGCTGGCCTTTTGCTCAC  
ATGGCTCGAC

FIGURE 14B

GATCTTCAATATTGGCCATTAGCCATATTATTTCATTGGTTATATAGCATAAATCAATATTGGCT  
ATTGGCCATTGCATACGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAAT  
ATGACCGCCATGTTGGCATTGATTATTGACTAGTTATTAATAGTAATCAATTACGGGGTCATT  
AGTTCATAGCCCATATATGGAGTTCCGCGTTACATAAATTACGGTAAATGGCCCGCCTGGCTG  
ACCGCCCAACGACCCCCGCCATTGACGTCAATAATGACGTATGTTCCOCATAGTAAACGCCAAT  
AGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGGCAGTACA  
TCAAGTGTATCATATGCCAAGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCECGCCTG  
GCATTATGCCCAGTACATGACCTTACGGGACTTTCTACTTGGCAGTACATCTACGTATTAGT  
CATCGCTATTACCATGGTGATGCGGTTTTTGGCAGTACACCAATGGGCGTGGATAGCGGTTTTGA  
CTCACGGGATTTCCAAGTCTCCACCCCATTTGACGTCAATGGGAGTTTTGTTTTGGCACCAAAA  
TCAACGGGACTTTCCAATAATGTCGTAACTGCGATCGCCCGCCCCGTTGACGCAAAATGGG  
CGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTGTAGTGAACCGTCAGATCA  
CTGAATTCTGACGACCTACTGATTAACGGCCATAGAGGGCTCTCTGCAGATCACTAGAAGCTTT  
ATTGCGGTAGTTTTATCACAGTTAAATGTCTAACGCAGTCAGTGCTTCTGACACAACAGTCTCG  
AACTTAAGCTGCAGTGACTCTCTTA AatccaocatggctacagGTGAGTACTCGCTACCTTAAGAGAGG  
CCTATCTGGCCAGTTAGCAGTCGAAGAAAGAAAGTTTAAAGAGAGCCGAAACAAGCGCTCATGA  
GCCCGAAGTGGCGAGCCCGATCTTCCCCATCGGTGATGTGCGCGATATAGGCGCCAGCAACC  
GCACCTGTGGCGCCGGTGTATGCCGGCCACGATGCGTCCGGCGTAGAGGATCCACAGGACGGG  
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GGCGGCCAAAGCGGTCCGGACAGTGCTCCGAGAACGGGTGCGCATAGAAATTGCATCAACGCA  
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GAGCATCACAATAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATA  
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CTCAGTTCGGTGTAGGTGCTCGTCCAAGCTGGGCTGTGTGCACGAACCCCCCGTTCAGCCC  
GACCGCTGCGCCTTATCCGCTAACTATCGTCTTGTAGTCCAACCCGGTAAGACACGACTTATCG  
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GTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGGACAGTATTTGGTATCTGCGCTCT  
GCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCCG  
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GAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGG  
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TTcTGAGGCGGAAAGAACCAGCTGTGGAATGTGTGTCACTTAGGGTGTGGAAAGTCCCCAGG  
CTCCCCAGCAGGCAGAGTATGCAAAGCATGCATCTCAATTAGTCAGCAACCAGGTGTGGAA  
AGTCCCCAGGCTCCCCAGCAGGCAGAGTATGCAAAGCATGCATCTCAATTAGTCAGCAACC  
ATAGTCCCGCCCCTAACTCCGCCATCCCCGCCCTAACTCCGCCCAGTCCGCCCATTTCTCCG  
CCCCATGGCTGACTAATTTTTTTTATTTATGCAGAGGCCGAGGCCGCTCGGCCTCTGAGCTA  
TTCCAGAAGTAGTGAGGAGGCTTTTTTGGAGGCCTAGGCTTTTTGCAAAAAGCTTGATTCTTCT  
GACACAACAGTCTCGAACTTAAGGCTAGAGCCACCATGATTGAACAAGATGGATTGCACGCA  
GGTCTCCGGCCGCTTGGGTGGAGGCTATTCCGGCTATGACTGGGCACAACAGACAATCGG  
CTGCTCTGATGCCGCCGTGTTCCGGCTGTGAGCGCAGGGGCGCCCGTCTTTTTTGTCAAGAC  
CGACCTGTCCGGTGCCCTGAATGAACTGCAGGACAGGCAGCGCGGCTATCGTGGCTGGCCA  
CGACGGGCGTTCTTGTGCGCAGCTGTGCTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTG-

FIGURE 15A

CTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTA  
TCCATCATGGCTGATGCAATGCGGGGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGAC  
CACCAAGCGAAACATCGCATCGAGCGAGCACGTA CTGGATGGAAGCCGGTCTTGTCGATCA  
GGATGATCTGGACGAAGAGCATCAGGGGGCTCGGGCCAGCCGAACTGTTCCGCCAGGCTCAAGG  
CGCGCATGCCCGACGGCGAGGATCTCGTCTGTGACCCATGGCGATGCCTGCTTGCCGAATATCA  
TGGTGGAAAATGGCCGCTTTTCTGGATTTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCT  
ATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGAC  
CGCTTCCTCGTGCTTTACGGTATCGCCGCTCCCGATTCCGACGCGCATCGCCTTCTATCGCCTTC  
TTGACGAGGccaTTCTgatggaggtagCGGCCGCTAACCTGGTTGCTGACTAATTGAGATGCATGCTTT  
GCATACTTCTGCCTGCTGGGGAGCCTGGGGACTTTCCACACCCTAACTGACACACATTCACACA  
GCTGGTTCTTTCCGCCTCAGAAGGTACACAGGCGAAATTGTAAGCGTTAATATTTTGTAAAA  
TTCCGCGTTAAATTTTGTAAATCAGCTCATTTTTTAACCAATAGGCCGAAATCGGCAAAATC  
CCTTATAAATCAAAAGAATAGACCGAGATAGGGTTGAGTGTGTTCAGTTTGGAACAAGAG  
TCCACTATTAAAGAACGTGGACTCCAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATG  
GCCCCAC

FIGURE 15B



GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAAATCAATATTGGCT  
ATTGGCCATTGCATACGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAAT  
ATGACCGCCATGTTGGCATTGATTATTGACTAGTTATTAATAGTAATCAATTACGGGGTCATT  
AGTTTCATAGCCCATATATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCCGCTGGCTG  
ACCGCCAAACGACCCCCGCCATTGACGTCAATAATGACGTATGTTCCCATAGTAACGCCAAT  
AGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCACTTGGCAGTACA  
TCAAGTGTATCATATGCCAAGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCTG  
GCATTATGCCAGTACATGACCTTACGGGACTTCTACTTGGCAGTACATCTACGTATTAGT  
CATCGCTATTACCATGGTGATGCGGTTTTGGCAGTACACCAATGGGCGTGGATAGCGGTTTGA  
CTCACGGGGATTTCCAAAGTCTCCACCCCATTGACGTCAATGGGAGTTTGTTTTGGCACCAAAA  
TCAAACGGGACTTTCCAAAATGTCGTAACAACTGCGATCGCCCGCCCCGTTGACGCAAAATGGG  
CGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGtttagtgaaccgtCAGATCACTAGAA  
GCTTTATTGCGGTAGTTTATCACAGTTAAATTGCTAACGCAGTCAGTGCTTCTGACACAACAG  
TCTCGAACTTAAGCTGCAGTGACTCTCTTAAatocaccatggctacagGTGAGTACTCGCTACCTTAAG  
AGAGGCCTATCTGGCCAGTTAGCAGTCAAGAAAGAAAGTTTAAAGAGAGCCGAAACAAGCGCT  
CATGAGCCCGAAAGTGGCGAGCCCGATCTTCCCCATCGGTGATGTCGGCGATATAGGCGCCAG  
CAACCGCACTGTGGCGCCGGTGTATGCCGGCCACGATGCGTCCGGCGTAGAGGATCCACAGG  
ACGGGTGTGGTCGCCATGATCGCGTAGTCGATAGTGGCTCCAAGTAGCGAAGCGAGCAGGAC  
TGGGCGGCGGCCAAAAGCGGTCCGACAGTGTCCGAGAACGGGTGCGCATAGAAATTGCATCA  
ACGCATATAGCGCTAGATCTTGTCTAGAGTTCGAGATCTGTGAGGCCATGTGAGCAAAAGGCC  
AGCAAAAGGCCAGGAACCGTAAAAAGGCCCGCTGCTGGCGTTTTTCCATAGGCTCCGCCCC  
CCTGACGAGCATCAAAAAATCGACGCTCAAGTTCAGAGGTGGCGAAACCCGACAGGACTATA  
AAGATACCAGGCGTTTTCCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCGACCTGCCGCT  
TACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGT  
AGGTATCTCAGTTCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGCTT  
CAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAAGACAGAC  
TTATCGCCACTGGCAGCAGCCACTGGTAAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTG  
TACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGGACAGTATTTGGTATCTG  
CGCTCTGTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAA  
CCACCGCTGTAGCGGTGGTTTTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAAGGA  
TCTCAAGAAGATCCTTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAAACGAAACTCACGT  
TAAGGGATTTTGGTTCATGAGATTATCAAAAAGGATCTTCACCTAGATCCTTTTatcgggtgaaataccg  
cacagatgcgttaaggagaaaataaccgcatcaggaattgtaagcgttaataatcagaagaactcgtcaagaaggcgtatagaaggcgtatgcgtgcgaa  
tcgggagcggcgataaccgtaaagcacgaggaagcggtcagccattcgcgcgaagctcttcagcaataatcacgggtagccaacgctatgtcctgatag  
cggtcgccacacccagccggccacagtcgatgaatccagaaaagcgccattttccaccatgataatcggcaagcaggcatcgccatgggtcacgacg  
agatcctcgccgtcgggcatgctgccttgagcctggcgaaacagttcgggtggcgagccctgatgctcttcgtccagatcatcctgatcgacaagacc  
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acgtcgagcacagctgcgcaaggaacgcccgtcgtggcagcagcagatagccgcgtgctcgtcttgagttcattcagggcaccggacaggtcgtc  
ttgacaaaaaagaacgggcgccccctgcgtgacagccggaacacggcgccatcagagcagccgattgtctgttgccagtcagccgaatagccctc  
tccacccaagcggcgaggagaacctgcgtgcaatccatctgttcaatcatgcgaacgatcctcatcctgtctcttgatcagagcttgatccctgcgcccac  
agatccttggcgcgagaaagccatccagtttactttcagggcttgcaacctaccagatAAAAGTGCTCATCATTGGAAAAACGT  
TCAATTeTGAGGCGGAAAGAACCAGCTGTGGAATGTGTGTGTCAGTTAGGGTGTGGAAAGTCCCC  
AGGCTCCCCAGCAGGCAGAAAGTATGCAAAGCATGCATCTCAATTAGTCAGCAACCAGGTGTG  
GAAAGTCCCCAGGCTCCCCAGCAGGAGAAATGCAAAGCATGCATCTCAATTAGTCAGCA  
ACCATAGTCCCGCCCCCTAACTCCGCCCATCCCGCCCCCTAACTCCGCCAGTTCCGCCCATTTCT  
CCGCCCATGGCTGACTAATTTTTTTTATTTATGACAGAGGCCGAGGCCGCTCGGCCTCTGAG  
CTATTCCAGAAGTAGTGAGGAGGCTTTTTTGGAGGCCTAGGCTTTTGCAAAAAGCTTGATTCT  
TCTGACACAACAGTCTCGAACTTAAGGCTAGAGCCACCATGATTGAACAAGATGGATTGCAC  
GCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTCCGCTATGACTGGGCACAACAGACAAT  
CGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTGACGCGAGGGGCGCCCGGTTCTTTTGTCAA  
GACCGACCTGTCCGGTGCCTGAATGAACTGCAGGACGAGGCAGCGCGGCTATCGTGGCTGG  
CCACGACGGGCGTTCTTTCGCGCAGCTGTGCTCGACGTTGTCACTGAAGCGGGAAGGGACTGG  
CTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCTCATCTCACCTTGCTCCTGCCGAGAAA-

FIGURE 16A

GTATCCATCATGGCTGATGCAATGCGGCGGCTGCATAACGCTTGATCCGGCTACCTGCCCATTC  
GACCACCAAGCGAAACATCGCATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGA  
TCAGGATGATCTGGACGAAGAGCATCAGGGGCTCGCGCCAGCCGAACCTGTTCCGCCAGGCTCA  
AGGCGCGCATGCCCGACGGCGAGGATCTCGTCTGTGAOCCATGGCGATGCGCTGCTTGCCGAAT  
ATCATGGTGGA AAAATGGCCGCTTTTCTGGATTTCATCGACTGTGGCCGGCTGGGTGTGGCGGAC  
CGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGC  
TGACCGCTTCCTCGTGCTTTACGGTATCGCCGCTCCCGATTTCGACGCGCATCGCCTTCTATCGC  
CTTCTTGACGAGGcaTTCTgtggatggCTacAGGTcgagocctggcgtcgtgattagtatgatgaocaggttatgaocctgattta  
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ACACCCTAACTGACACACATTCCACAGCTGGTTCTTTCCGCCTCAGAAGGTACACAGGCGGAAA  
TTGTAAGCGTTAATATTTTGTAAAATTCGCGTTAAATTTTTGTTAAATCAGCTCATTTTTTAA  
CCAATAGGCCGAAATCGGCAAAATCCCTTATAAATCAAAAAGAATAGACCGAGATAGGGTTGA  
GTGTTGTTCCAGTTTGGAAACAAGAGTCCACTATTAAAGAACGTGGACTCCAACGTCAAAGGG  
CGAAAAACCGTCTATCAGGGCGATGGCCAC

FIGURE 16B

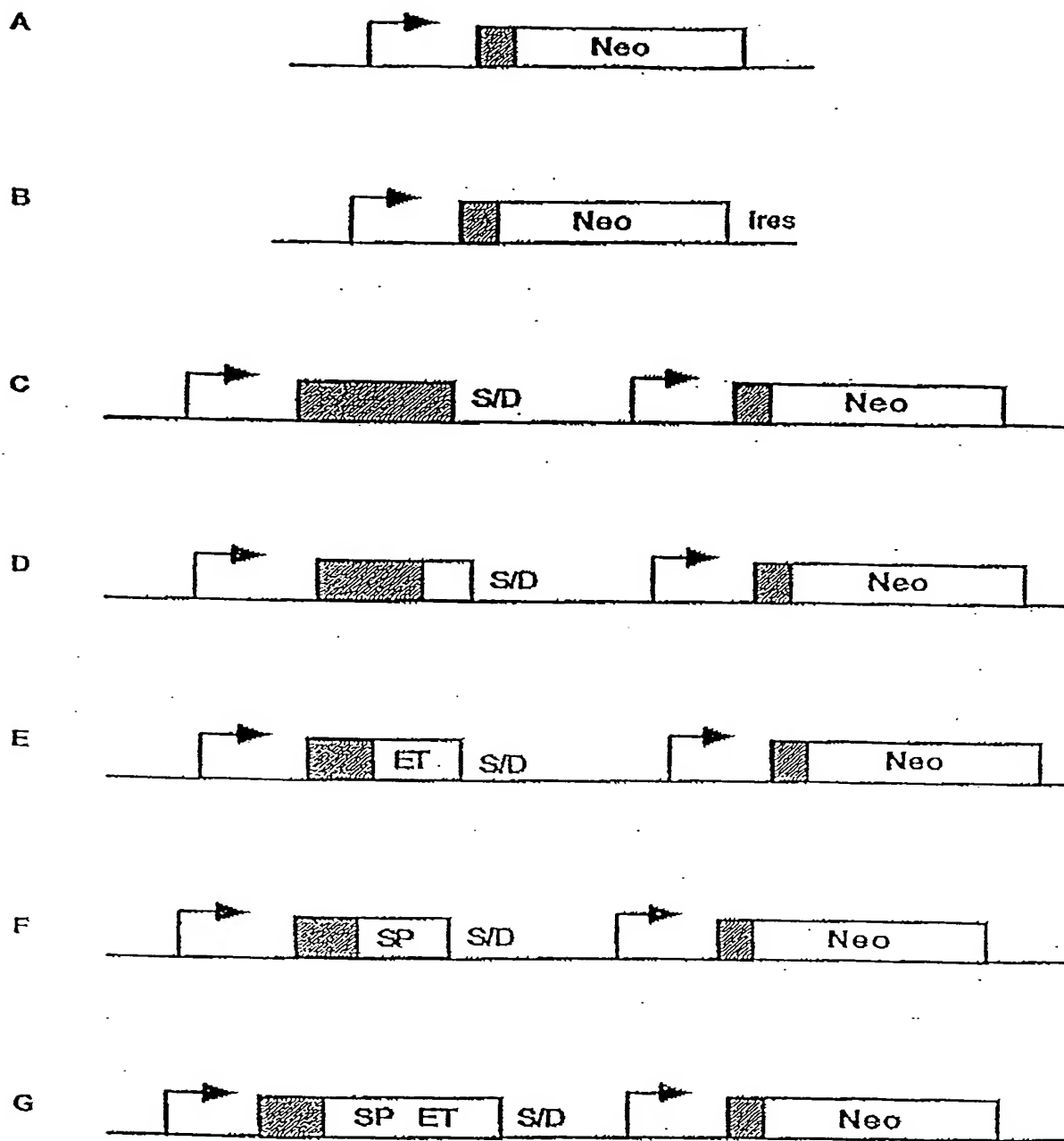


Figure 17

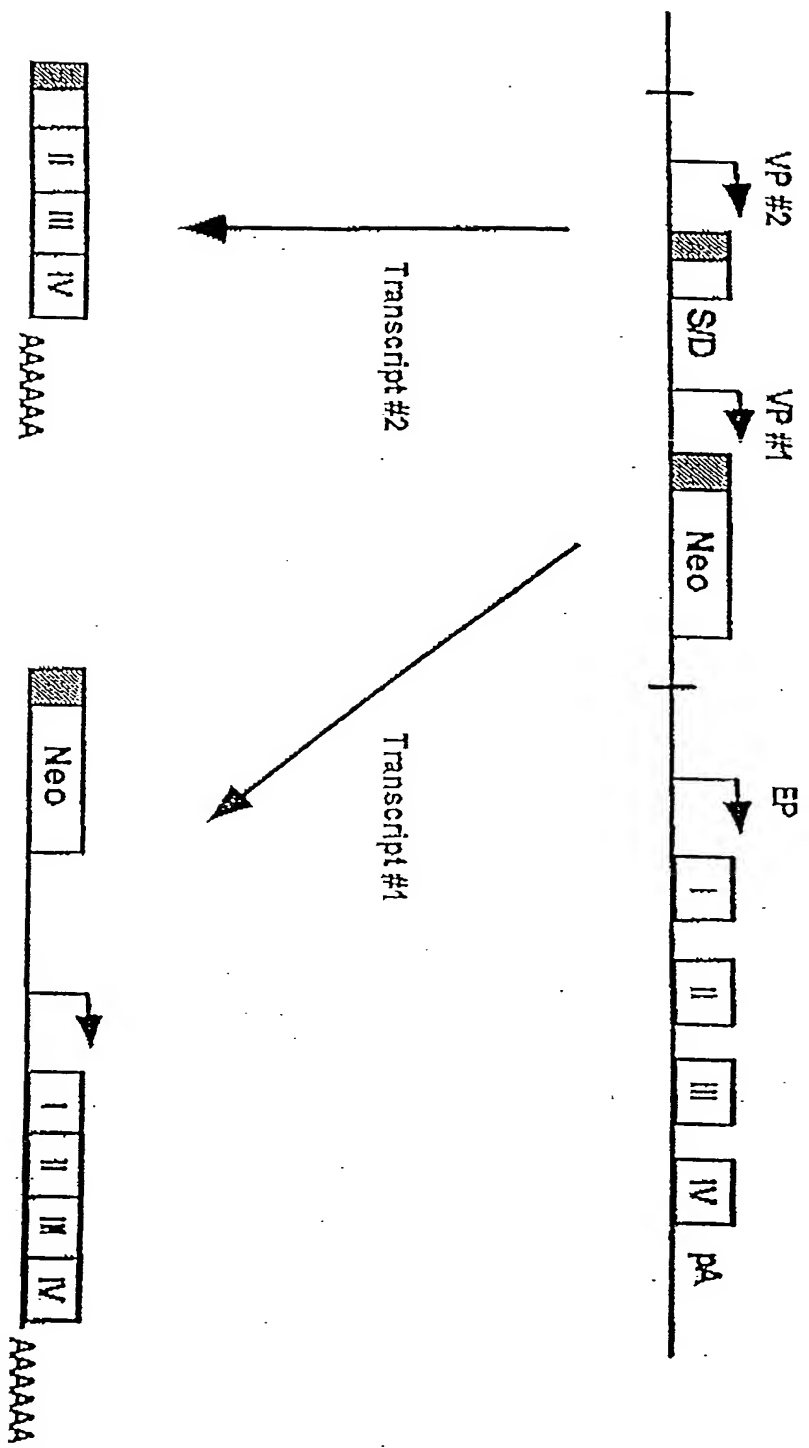


Figure 18



Figure 19

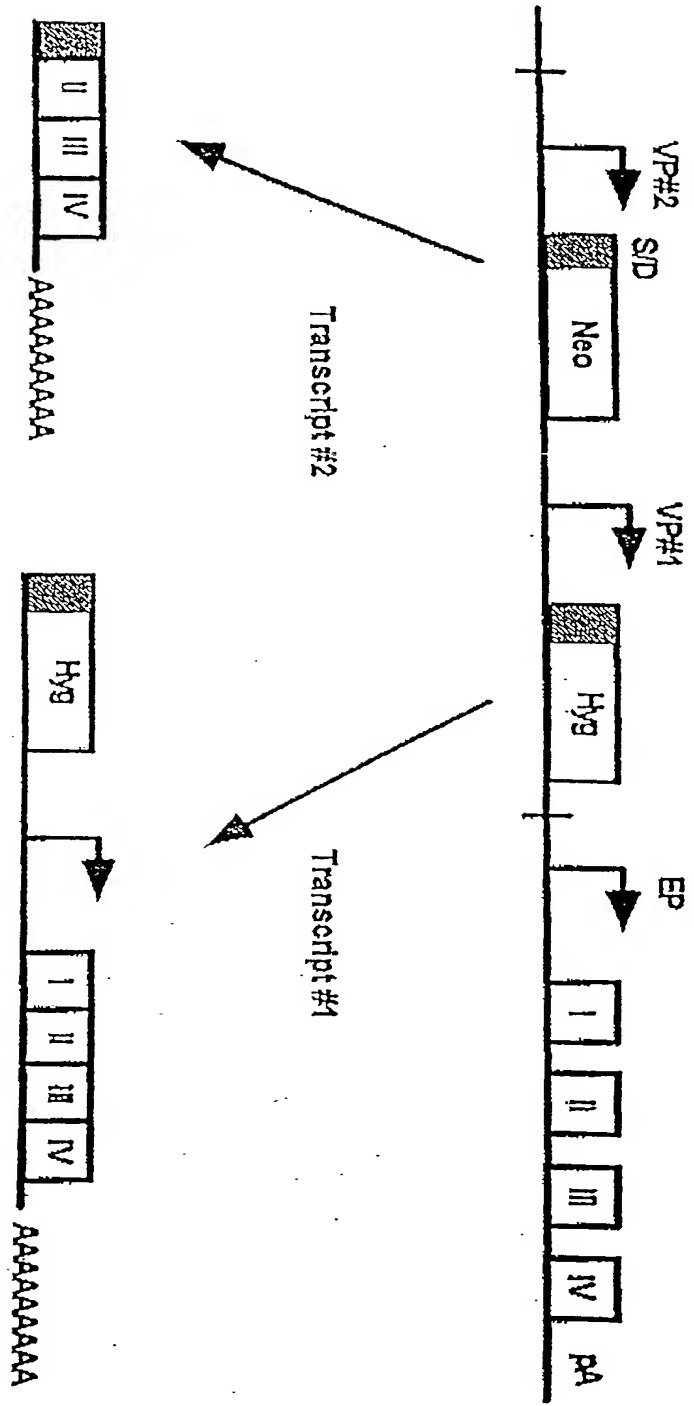


Figure 20A

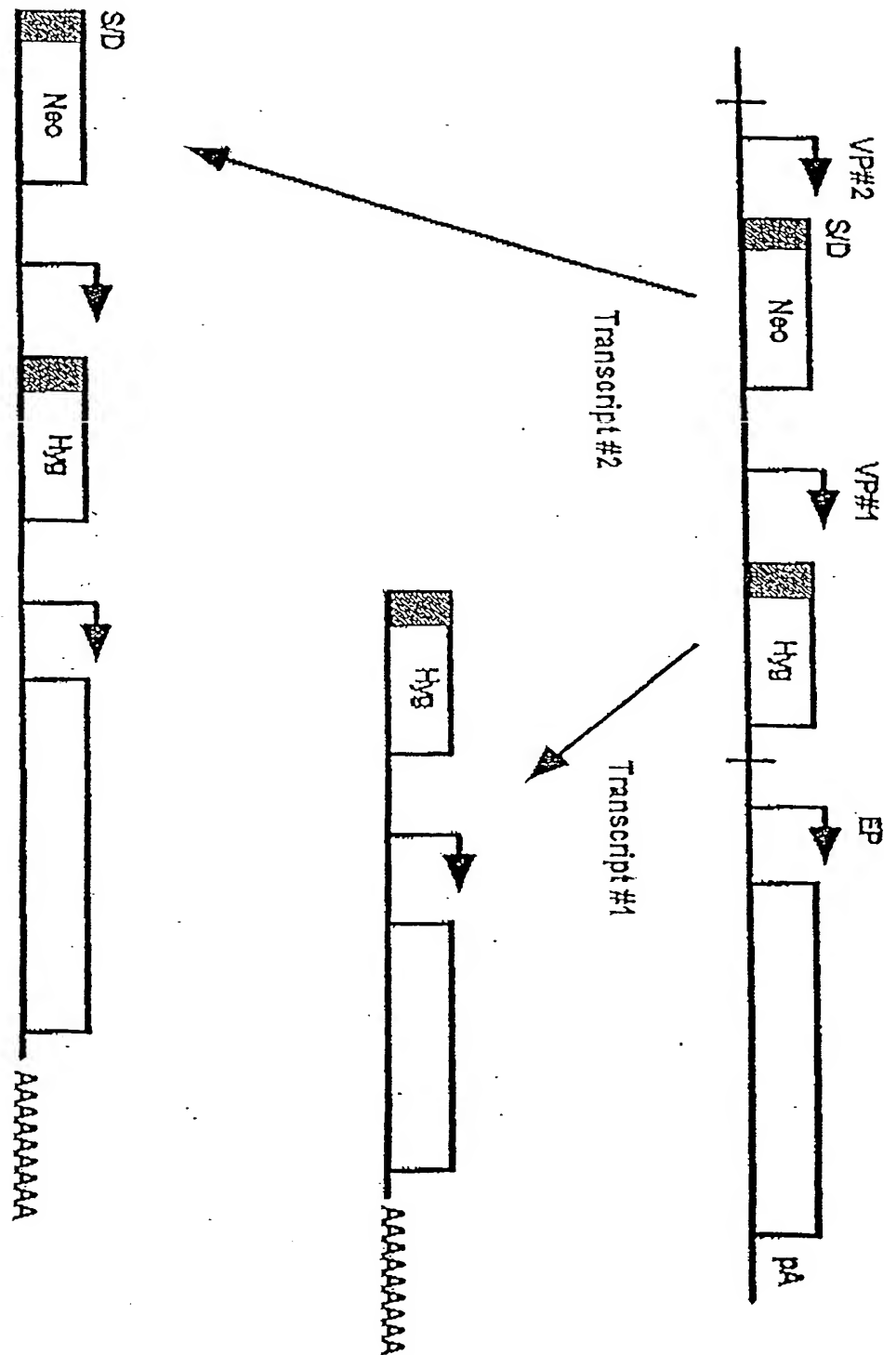


Figure 20B

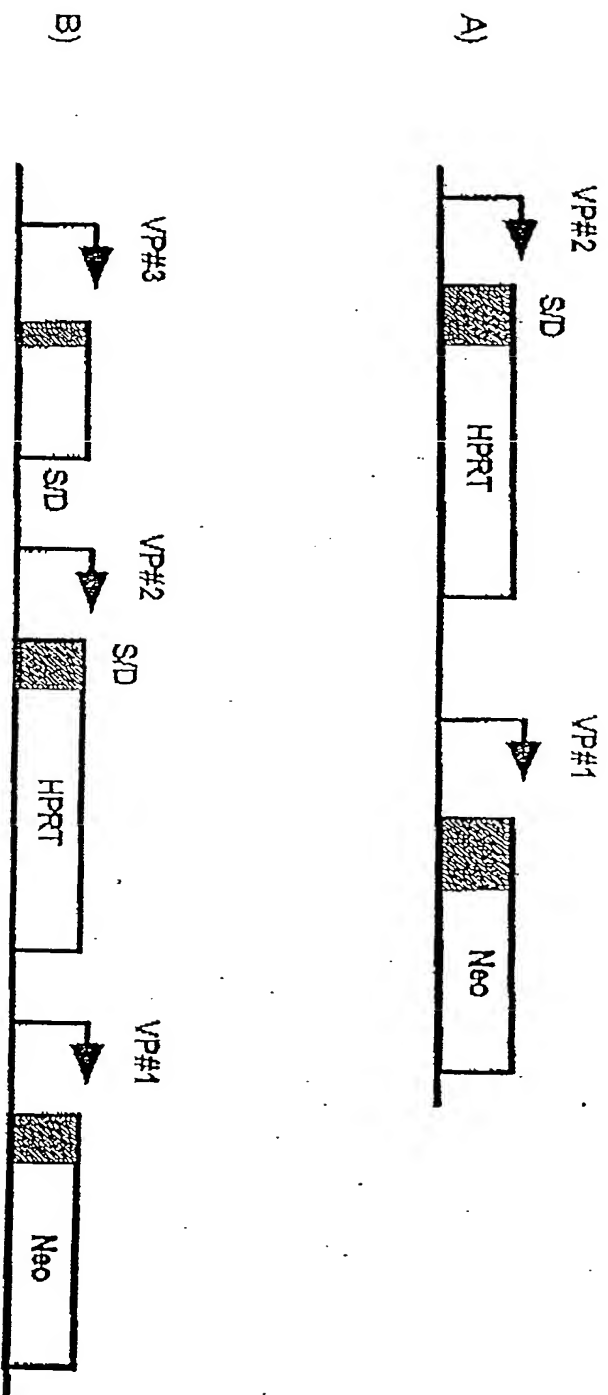


Figure 21



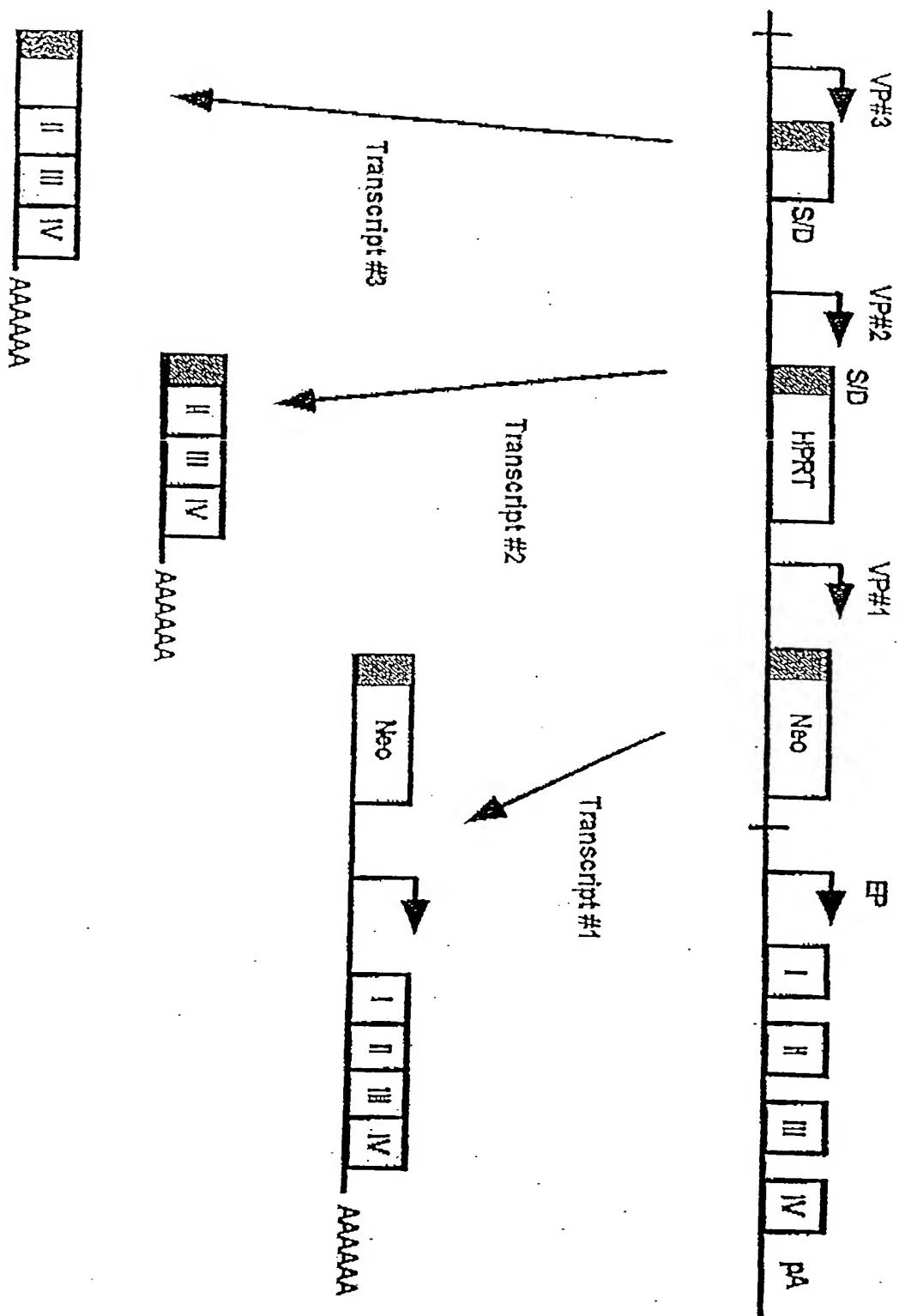
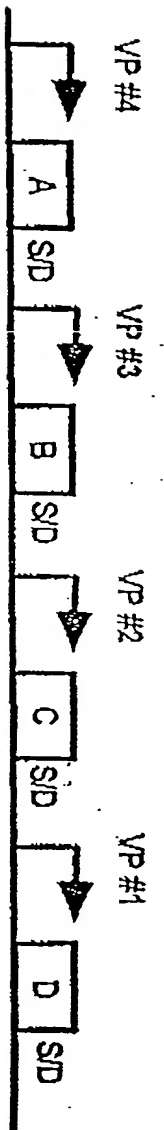


Figure 22



A) Exon A and Flanking Intron

5' UTR	ACCACAGGTGATG	Vector Intron
--------	---------------	---------------

B) Exon B and Flanking Intron

5' UTR	ACCATGCAGGTGATG	Vector Intron
--------	-----------------	---------------

C) Exon C and Flanking Intron

5' UTR	ACCATGCAGGTGATG	Vector Intron
--------	-----------------	---------------

D) Exon D and Flanking Intron

5' UTR	ACCATGGGCAGGTGATG	Vector Intron
--------	-------------------	---------------

Figure 23

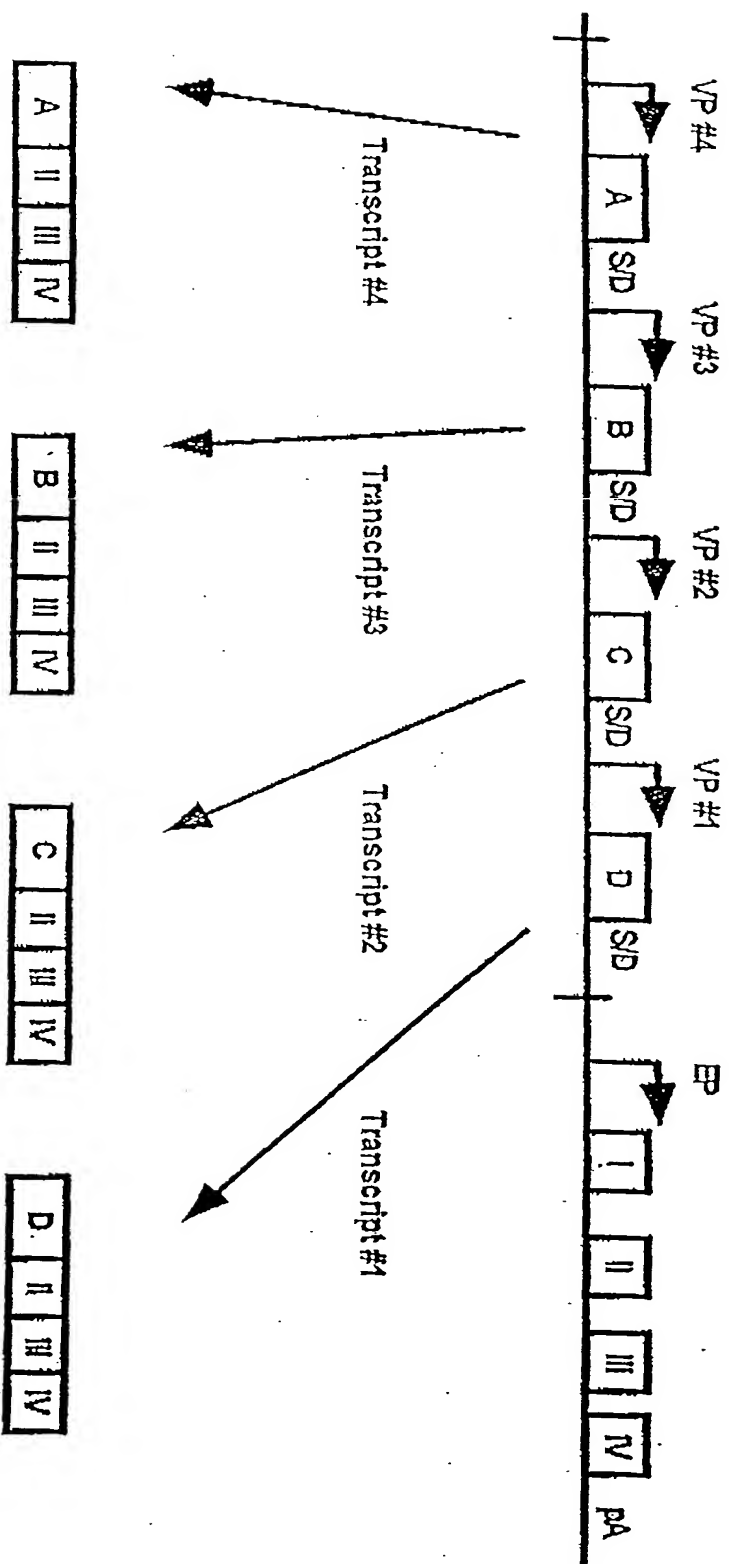


Figure 24

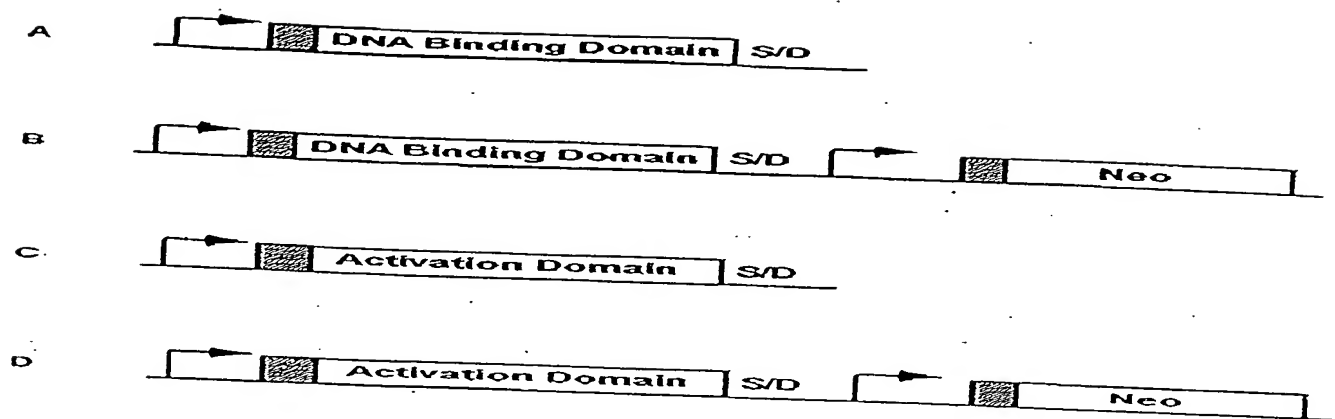


FIGURE 25

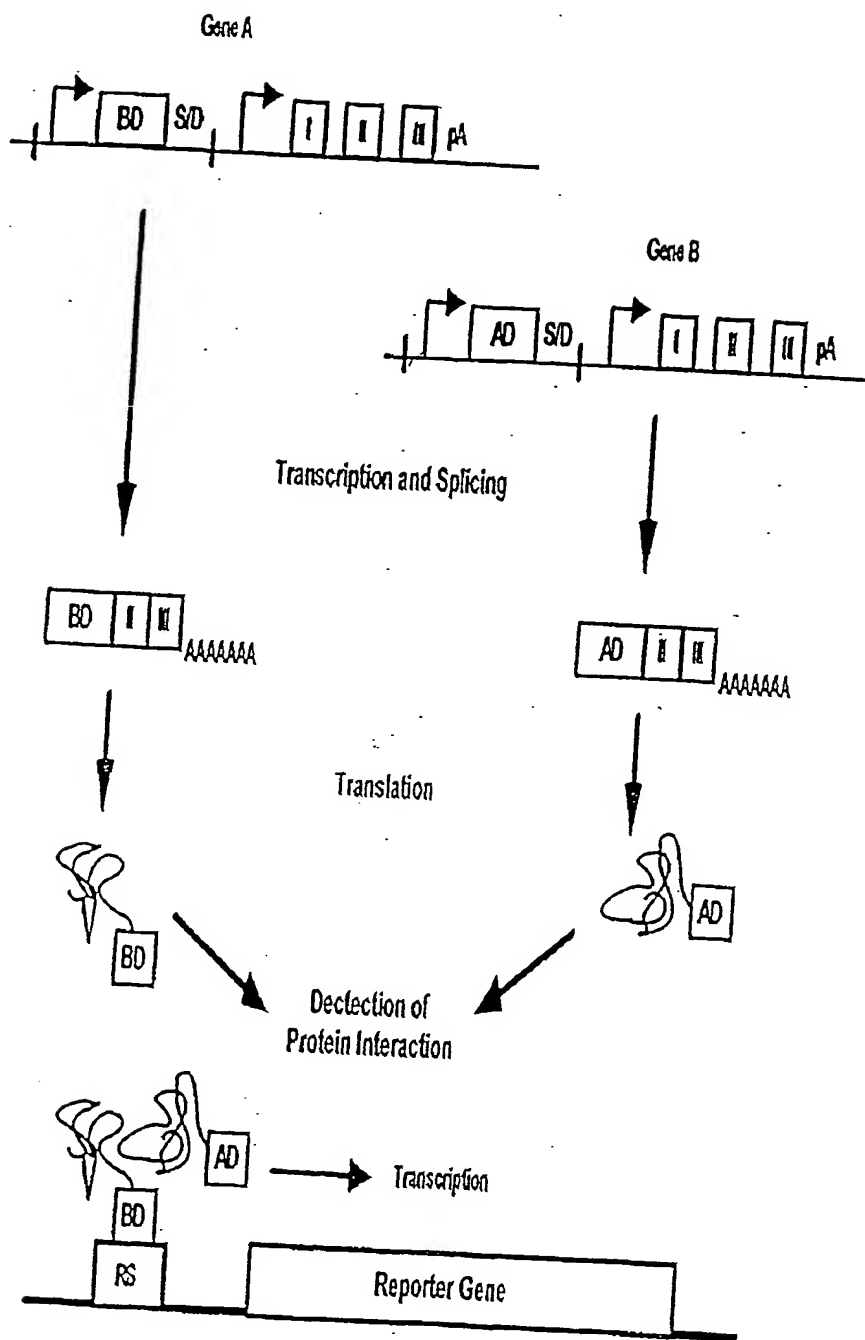


Figure 26

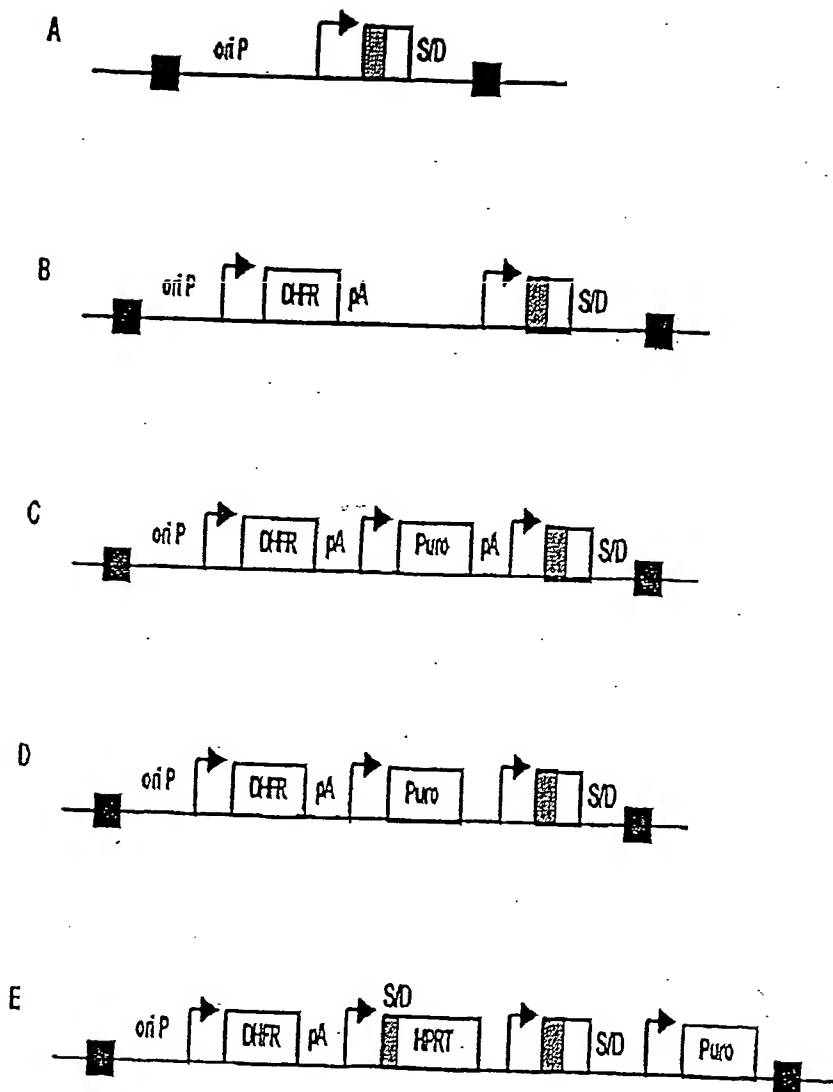


FIGURE 27

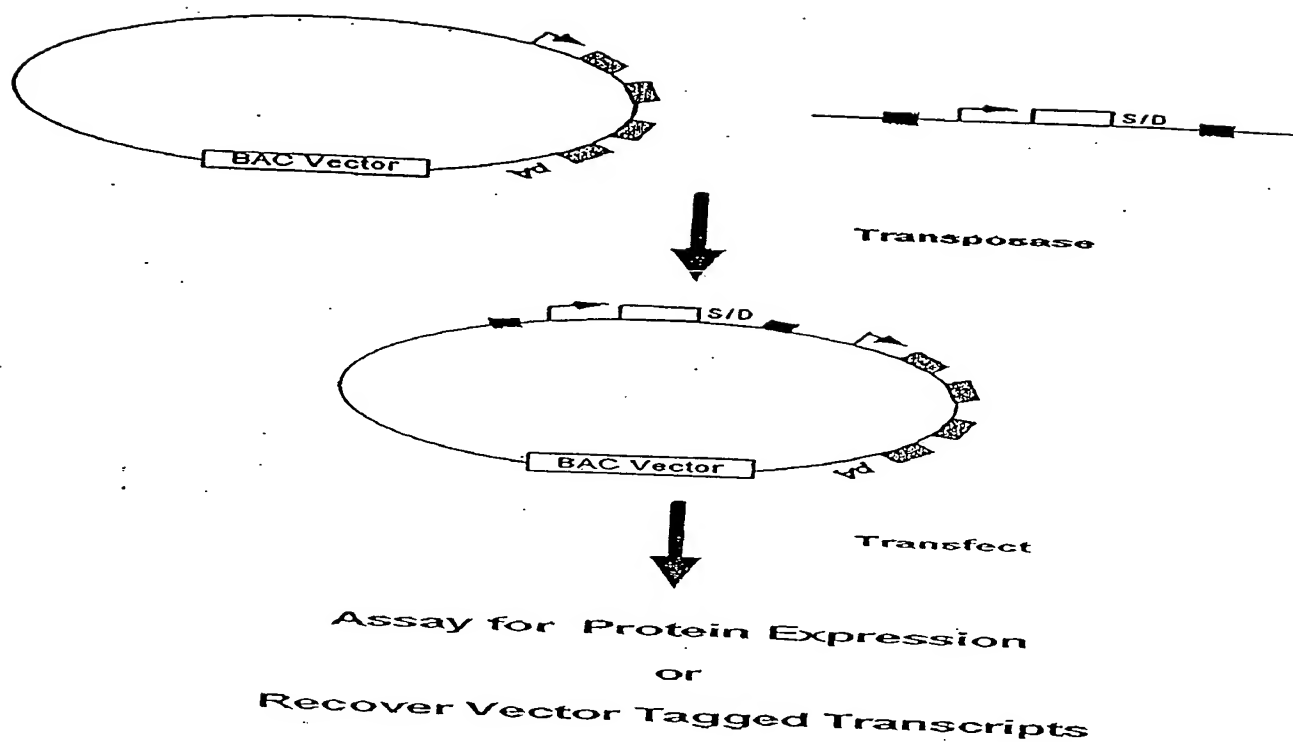


FIGURE 28





GGTGATGCCGGCCACGATGCGTCCGGCGTAGAGGATCCACAGGACGGGTG  
TGGTCGCCATGATCGCGTAGTCGATAGTGGCTCCAAGTAGCGAAGCGAGC  
AGGACTGGGCGGCGGCCAAAGCGGTCCGACAGTGCTCCGAGAACGGGTGC  
GCATAGAAATTGCATCAACGCATATAGCGCTAGATCCTTGCTAGAGTCGAG  
GCCGCCACCGCGGTGGAGCTCCAGCTTTTGTTCCTTTAGTGAGGGTTAAT  
TTCGAGCTTGGCGTAATCATGGTCATAGCTGTTTCCTGTGTGAAATTGTTA  
TCCGCTCACAATTCCACACAACATACGAGCCGGAAGCATAAAGTGTAAG  
CCTGGGGTGCCTAATGAGTGAGCTAACTCACATTAATTGCGTTGCGCTCAC  
TGCCCGCTTTCCAGTCGGGAAACCTGTCGTGCCAGCTGCATTAATGAATCG  
GCCAACGCGCGGGGAGAGGCGGTTTGCCTATTGGGCGCTCTTCCGCTTCCT  
CGCTCACTGACTCGCTGCGCTCGGTCTCGGCTGCGGCGAGCGGTATCAG  
CTCACTCAAAGGCGGTAATACGGTTATCCACAGAATCAGGGGATAACGCA  
GGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAA  
AGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATC  
ACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAA  
AGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCGCTCTCCTGTTCCG  
ACCCTGCCGCTTACCGGATACCTGTCCGCCITTTCTCCCTTCGGGAAGCGTG  
GCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTGCTT  
CGCTCCAAGCTGGGCTGTGTGCACGAACCCCCCGTTCAGCCCGACCGCTGC  
GCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTA  
TCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGT  
AGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAG  
AAGGACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAA  
AAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTG  
GTTTTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAAGGATCTCAAG  
AAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAAACGAAAAT  
CACGTTAAGGGATTTTGGTCATGAGATTATCAAAAAGGATCTTCACCTAGA  
TCCTTTTAAATTAATAAATGAAGTTTTAAATCAATCTAAAGTATATATGAGT  
AACTTGGTCTGACAGTTACCAATGCTTAATCAGTGAGGCACCTATCTCAG  
CGATCTGTCTATTTGCTTCATCCATAGTTGCCTGACTCCCCGTCGTGTAGAT  
AACTACGATACGGGAGGGCTTACCATCTGGCCCCAGTGCTGCAATGATACC  
GCGAGACCCACGCTCACCGGCTCCAGATTTATCAGCAATAAACCAGCCAGC  
CGGAAGGGCCGAGCGCAGAAGTGGTCCTGCAACTTTATCCGCCTCCATCCA  
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TTTGCGCAACGTTGTTGCCATTGCTACAGGCATCGTGGTGTACGCTCGTC  
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CGTTGTCAGAAGTAAGTTGGCCGCGAGTGTTATCACTCATGGTTATGGCAGC  
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GGTGAGTACTCAACCAAGTCATTCTGAGAATAGTGTATGCGGCGACCGAG  
TTGCTCTTGCCCGGCGTCAATACGGGATAATACCGCGCCACATAGCAGAAC  
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GATCTTACCGCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGACCCAA  
CTGATCTTCAGCATCTTTTACTTTACCAGCGTTTCTGGGTGAGCAAAAAC  
AGGAAGGCAAAATGCCGCAAAAAAGGGAATAAGGGCGACACGGAAATGT  
TGAATACTCATACTCTTCCTTTTTCAATATTATTGAAGCATTATCAGGGTT  
ATTGTCTCATGAGCGGATACATATTTGAATGTATTTAGAAAAATAACAAA  
TAGGGGTTCCGCGCACATTTCCCCGAAAAGTGC

Figure 29B

GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAA  
 TCAATATTGGCTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTA  
 CATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG  
 ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT  
 ATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCG  
 CCAACGACCCCCGCCCATTTGACGTCAATAATGACGTATGTTCCCATAGTA  
 ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA  
 ACTGCCCCTTTGGCAGTACATCAAGTGTATCATATGCCAAGTCCGCCCCCT  
 ATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCAGTACATG  
 ACCTTACGGGACTTTTCTACTTGGCAGTACATCTACGTATTAGTCATCGCT  
 ATTACCATGGTGATGCGGTTTTTGGCAGTACACCAATGGGCGTGGATAGCG  
 GTTTGACTCACGGGGATTTCCTAAGTCTCCACCCCATTTGACGTCAATGGGAG  
 TTTGTTTTGGCACCAAAAATCAACGGGACTTTCCAAAATGTCGTAACAACCTG  
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 ACGACTCACTATAGGGCGACAGGTGAGTACTCGCTACCTTAAGgcctatctggccg  
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Figure 30A

agcccgctcctacctgcaatatcaggggtgactgtgtgcagcttigacgatggagtagattgcctccctggttccacctatg  
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CTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCG  
CTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCTGTTCTGCT  
CCAAGCTGGGCTGTGTGCACGAACCCCCGTTTCAGCCCGACCGCTGCGCCT  
TATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGC  
CACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGC  
GGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAG  
GACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAG  
AGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTT-

FIGURE 30B

TTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAA  
GATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAAACCTCA  
CGTTAAGGGATTTTGGTCATGAGATTATCAAAAAGGATCTTCACCTAGATC  
CTTTTATCGGTGTGAAATACCGCACAGATGCGTAAGGAGAAAAATACCGCAT  
CAGGAAATTGTAAGCGTTAATAATTGAGAAAGAACTCGTCAAGAAAGGCGAT  
AGAAGGCGATGCGCTGCGAATCGGGAGCGGCGATACCGTAAAGCACGAGG  
AAGCGGTCAGCCCATTCGCCGCCAAGCTCTTCAGCAATATCACGGGTAGCC  
AACGCTATGTCCTGATAGCGGTCCGCCACACCCAGCCGGCCACAGTCGATG  
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GCGAACAGTTCGGCTGGCGCGAGCCCTGATGCTCTTCGTCCAGATCATCC  
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CCGCTTCAGTGACAACGTCGAGCACAGCTGCGCAAGGAACGCCCGTCGTG  
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GACAGGTTCGGTCTTGACAAAAAGAACCGGGCGCCCTGCGCTGACAGCCG  
GAACACGGCGGCATCAGAGCAGCCGATTGTCTGTTGTGCCAGTTCATAGCC  
GAATAGCCTCTCCACCCAAGCGGCCGGAGAACCTGCGTGCAATCCATCTTG  
TTCAATCATGCGAAACGATCCTCATCCTGTCTCTTGATCAGAGCTTGATCC  
CCTGCGCCATCAGATCCTTGGCGGCGAGAAAGCCATCCAGTTTACTTTGCA  
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TTCTTTCCGCCTCAGAAGGTACACAGGCGAAAATTGTAAGCGTTAATATTTT  
GTAAATTCGCGTTAAATTTTTGTAAATCAGCTCATTTTTTAACCAATAG  
GCCGAAATCGGCAAAATCCCTTATAAATCAAAAGAATAGACCGAGATAGG  
GTTGAGTGTTGTTCCAGTTTGGAAACAAGAGTCCACTATTAAAGAACGTGGA  
CTCCAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATGGCCAC

FIGURE 30C

GATCTTCAATATTGGCCATTAGCCATATTATTCAATTGGTTATATAGCATAAA  
TCAATATTGGCTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTA  
CATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG  
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT  
ATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCG  
CCCAACGACCCCCGCCCATTTGACGTCAATAATGACGTATGTTCCCATAGTA  
ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA  
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ATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCAGTACATG  
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Figure 31A

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CTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCG  
CTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCTGCTCGCT  
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GACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAG  
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FIGURE 31B



TTTTTGTGGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAA  
GATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAAACTCA  
CGTTAAGGGATTTTGGTCATGAGATTATCAAAAAGGATCTTCACCTAGATC  
CTTTTATCGGTGTGAAATACCGCACAGATGCGTAAGGAGAAAAATACCGCAT  
CAGGAAATTGTAAGCGTTAATAATTCAGAAGAACTCGTCAAGAAGGCGAT  
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AAGCGGTACAGCCCATTCGCCGCCAAGCTCTTCAGCAATATCACGGGTAGCC  
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GGGGAGCCTGGGGACTTTCCACACCCTAACTGACACACATTCCACAGCTGG  
TTCTTTCCGCCTCAGAAGGTACACAGGCGAAAATTGTAAGCGTTAATATTTT  
GTAAAAATTTCGCGTTAAATTTTTGTAAATCAGCTCATTTTTTAAACCAATAG  
GCCGAAATCGGCAAAATCCCTTATAAATCAAAAGAATAGACCGAGATAGG  
GTTGAGTGTTGTTCCAGTTTGGAAACAAGAGTCCACTATTAAGAACGTGGA  
CTCCAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATGGCCAC

FIGURE 31C

GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAA  
TCAATATTGGCTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTA  
CATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG  
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT  
ATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCCGCTGGCTGACCG  
CCCAACGACCCCCGCCATTGACGTCAATAATGACGTATGTTCCCATAGTA  
ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA  
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AGACGATTTTCGATCTGGACATGTTGGGGGACGGGGATTCCCCGGGGCCGG  
GATTTACCCCCACGACTCCGCCCCCTACGGCGCTCTGGATATGGCCGACT  
TCGAGTTTGAGCAGATGTTTACCGATGCCCTTGAATTGACGAGTACGGTG  
GGGAATTCAGGTGAGTACTCGCTACCTTAAGgcctatctggcgtttaaacagatgtgtataag  
agacagctctcttaaGGTAGCCTGTCTCTTATACACATCTagatccttgctagagtcgaccaattctc  
atgtttgacagcttatcatcgagatcctgagcttgatggcgactctcagtacaatctgctctgctgccgcatagttaaagcc  
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tttgcatagggggggggaaatgtagtcttatgaatacactgtagtcttgaacatggttaacgatgagtttagcaacatgcc  
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acggtgttatccagtgattttttctcatttttagcttcttagctcctgaaatctcgataactcaaaaaatacgcccggtag  
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CGCGCCgctctcctggctaggagtcacgtagaaaggactaccgacgaaggaaacttgggtcgccggtgtgttcgtat-

Figure 32A



atggaggtagtaagacctccctttacaacctaaggcgaggaaactgcccttgctattccacaatgtcgtcttacaccattgagt  
cgtctcccttttggaatggccctggaccggcccaacccggcccgtaaggaggagtcattgtctgttattcatggctt  
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GTCGATAGTGGCTCCAAGTAGCGAAGCGAGCAGGACTGGGCGGGCGGCCAA  
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TTTTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCA  
AGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCC  
CCCTGGAAGCTCCCTCGTGCGCTCTCCTGTTCCGACCCTGCCGCTTACCGG  
ATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCA  
CGCTGTAGGTATCTCAGTTCGGTGTAGGTGCTTCGCTCCAAGCTGGGCTGT  
GTGCACGAACCCCCCGTTCAGCCCGACCGCTGCGCTTATCCGGTAACAT  
CGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCC  
ACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGT-

FIGURE 32B

TCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGGACAGTATTTGGTA  
TCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTT  
GATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGCAAGC  
AGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTT  
CTACGGGGTCTGACGCTCAGTGAACGAAAACTCACGTTAAGGGATTTTG  
GTCATGAGATTATCAAAAAGGATCTTCACCTAGATCCTTTTATCGGTGTGA  
AATACCGCACAGATGCGTAAGGAGAAAAATACCGCATCAGGAAATTGTAAG  
CGTTAATAATTGAGAAGAACTCGTCAAGAAGGCGATAGAAGGCGATGCGC  
TGCGAATCGGGAGCGGCGATACCGTAAAGCACGAGGAAGCGGTACGCCA  
TTCGCCGCCAAGCTCTTCAGCAATATCACGGGTAGCCAACGCTATGTCCTG  
ATAGCGGTCCGCCACACCCAGCCGGCCACAGTCGATGAATCCAGAAAAGC  
GGCCATTTTCCACCATGATATTCGGCAAGCAGGCATCGCCATGGGTACGA  
CGAGATCCTCGCCGTGGGGCATGCTCGCCTTGAGCCTGGCGAACAGTTCCG  
CTGGCGCGAGCCCCCTGATGCTCTTCGTCCAGATCATCCTGATCGACAAGAC  
CGGCTTCCATCCGAGTACGTGCTCGCTCGATGCGATGTTTCGCTTGGTGGT  
CGAATGGGCAGGTAGCCGGATCAAGCGTATGCAGCCGCCGCATTGCATCA  
GCCATGATGGATACTTTCTCGGCAGGAGCAAGGIGAGATGACAGGAGATC  
CTGCCCCGGCACTTCGCCCAATAGCAGCCAGTCCCTTCCCGCTTCAGTGAC  
AACGTGAGCACAGCTGCGCAAGGAACGCCCGTCGTGGCCAGCCACGATA  
GCCGCGCTGCCTCGTCTTGACGTTTCATTACAGGGCACCGGACAGGTCCGTCT  
TGACAAAAAGAACCAGGGCGCCCCCTGCGCTGACAGCCGGAACACGGCGGCA  
TCAGAGCAGCCGATTGTCTGTTGTGCCAGTCATAGCCGAATAGCCTCTCC  
ACCCAAGCGGCCGGAGAACCTGCGTGCAATCCATCTTGTTCAATCATGCGA  
AACGATCCTCATCCTGTCTCTTGATCAGAGCTTGATCCCCTGCGCCATCAG  
ATCCTTGCGCGCGAGAAAGCCATCCAGTTTACTTTGCAGGGCTTGTC AAC  
TTACCAGATAAAAGTGCTCATCATTTGGA AAAAacattcaattcgtcgacctcgaaattctaccggg  
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GACTTTCCACACCCTAACTGACACACATTCCACAGCTGGTTCTTTCCGCCTC  
AGAAGGTACACAGGCGAAAATTGTAAGCGTTAATATTTTGTAAAATTTCGCG  
TTAAATTTTTGTAAATCAGCTCATTTTTTTAACCAATAGGCCGAAATCGGC  
AAAATCCCTTATAAATCAAAAGAATAGACCGAGATAGGGTTGAGTGTTGTT  
CCAGTTTGGAACAAGAGTCCACTATTAAGAACGTGGACTCCAACGTCAA  
GGCGAAAAACCGTCTATCAGGGCGATGGCCAC

FIGURE 32C

GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAA  
TCAATATTGGCTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTA  
CATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG  
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT  
ATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCG  
CCCAACGACCCCGCCATTGACGTCAATAATGACGTATGTTCCCATAGTA  
ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA  
ACTGCCCACTTGGCAGTACATCAAGTGTATCATATGCCAAGTCCGCCCCCT  
ATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCAGTACATG  
ACCTTACGGGACTTTCTACTTGGCAGTACATCTACGTATTAGTCATCGCT  
ATTACCATGGTGATGCGGTTTTGGCAGTACACCAATGGGCGTGGATAGCG  
GTTTGACTCACGGGGATTTCGAAGTCTCCACCCATTGACGTCAATGGGAG  
TTTGT TTTGGCACCAAAATCAACGGGACTTTCCAAAATGTCGTAACAAC TG  
CGATCGCCCGCCCGTTGACGCAATGGGCGGTAGGCGTGTACGGTGGGA  
GGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCACTGAATTCTG  
ACGACCTACTGATTAACGGCCAGATCTAAGCTAGCTTCCTGAAAGATGAAG  
CTACTGTCTTCTATCGAACAAGCATGCGATATTTGCCGACTTAAAAAGCTC  
AAGTGCTCCAAAGAAAAACCGAAGTGCGCCAAGTGTCTGAAGAACAAC TG  
GGAGTGTGCTACTCTCCCAAAACCAAAAGGTCTCCGCTGACTAGGGCACA  
TCTGACAGAAGTGGAATCAAGGCTAGAAAGACTGGAACAGCTATTTCTACT  
GATTTTTCTCTCGAGAAGACCTTGACATGATTTTGAAAATGGATTCTTTACA  
GGATATAAAAGCATTGTTAACAGGATTATTTGTACAAGATAATGTGAATAA  
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ACAAAGGTCAAAGACAGTTGACTGTATCGCCGGAATTCAGGTGAGTACTC  
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FIGURE 33A

aactgactgaaatgcctcaaaatgttctttacgatgccattgggatatatcaacgggtggtatafccagtgattttttctccattt  
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GAGAACGGGTGCGCATAGAAATTGCATCAACGCATATAGCGCTAGATCCT  
TGCTAGAGTCGAGATCTGTGCGAGCCATGTGAGCAAAAAGGCCAGCAAAAAGG  
CCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCC  
CCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAAC  
CCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTG  
CGCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCC  
CTTCGGGAAGCGTGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGT-

FIGURE 33B

TCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCCGTT  
CAGCCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCG  
GTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAG  
CAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTA  
ACTACGGCTACACTAGAAGGACAGTATTTGGTATCTGCGCTCTGCTGAAGC  
CAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCA  
CCGCTGGTAGCGGTGGTTTTTTTTGTTTGCAAGCAGCAGATTACGCGCAGAA  
AAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTC  
AGTGAACGAAAACTCACGTAAAGGGATTTTGGTCATGAGATTATCAAAA  
AGGATCTTCACCTAGATCCTTTTATCGGTGTGAAATACCGCACAGATGCGT  
AAGGAGAAAAATACCGCATCAGGAAATTGTAAGCGTTAATAATTGAGAAGA  
ACTCGTCAAGAAGGCGATAGAAGGCGATGCGCTGCGAATCGGGAGCGGCG  
ATACCGTAAAGCACGAGGAAGCGGTACGCCATTTCGCCGCCAAGCTCTTCA  
GCAATATCACGGGTAGCCAACGCTATGTCCTGATAGCGGTCCGCCACACCC  
AGCCGGCCACAGTCGATGAATCCAGAAAAGCGGCCATTTTCCACCATGATA  
TTCGGCAAGCAGGCATCGCCATGGGTACGACGAGATCCTCGCCGTCGGG  
CATGCTCGCCTTGAGCCTGGCGAACAGTTCGGCTGGCGCGAGCCCCCTGATG  
CTCTTCGTCCAGATCATCCTGATCGACAAGACCGGCTTCCATCCGAGTACG  
TGCTCGCTCGATGCGATGTTTCGCTTGGTGGTCGAATGGGCAGGTAGCCGG  
ATCAAGCGTATGCAGCCGCCGATTGCATCAGCCATGATGGATACTTTCTC  
GGCAGGAGCAAGGTGAGATGACAGGAGATCCTGCCCGGCACTTCGCCCA  
ATAGCAGCCAGTCCCTTCCCGCTTCAGTGACAACGTCGAGCACAGCTGCGC  
AAGGAACGCCCCGTCGTGGCCAGCCACGATAGCCGCGCTGCCTCGTCTTGCA  
GTTCAATCAGGGCACCGGACAGGTCGGTCTTGACAAAAAGAACCGGGGCGC  
CCCTGCGCTGACAGCCGGAACACGGCGGCATCAGAGCAGCCGATTGTCTG  
TTGTGCCCAGTCATAGCCGAATAGCCTCTCCACCCAAGCGGCCGGAGAACC  
TGCGTGCAATCCATCTTGTTCAATCATGCGAAACGATCCTCATCCTGTCTCT  
TGATCAGAGCTTGATCCCCTGCGCCATCAGATCCTTGCGCGCGAGAAAGCC  
ATCCAGTTTACTTTGCAGGGCTTGTCAACCTTACCAGATAAAAGTGCTCAT  
CATTGGAACAcattcaattcgtcgacctcgaaattctaccggtagggaggcgcttttcccaaggcagctctgga  
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gcaatggagcgggtaggctttggggcagcggccaatagcagctttgctccttcgctttctgggctcagaggctgnaag  
gggtgggtccggggcgggctcagggcgggctcagggcgggcgggcgcccgaaggctcctcggaggcccg  
cattctgcagcttcaaaagcgacgtctgcgcgctgtctcctctctcatctcgggcttgcacctgcatccatctag  
atctcgagcagctgaagcttaccatgaccgagtaagcccacgggtgcgctcgccaccgacgacgtccccgggc  
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cgcggtggcggtctggaccacgcccggagagcgtcgaagcggggcggtgttcgcccagatcgggccgcatggcc  
gagttgagcgggtcccggctggccgagcaacagatggaaggcctcctggcgccgacccgggccaaggagccc  
cgtggttcttgcccaccgtcggcgcttctgcccaccaccagggaagggtctggcaagcgcgctcgtctccccg  
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ggctcggcttcaccgtcaccgcccagctcgaggtgcccgaaggaccgacacctgggtgcatgaccgcaagcccggg  
cctgacgccccgccccacgaccgagcgcccgaccgaaaggagcgacgaccccatgcatcgatggcactgggcagg  
taagtatcaaggtagcGGCCGCTAACCTGGTTGCTGACTAATTGAGATGCATGCTTT  
GCATACTTCTGCCTGCTGGGGAGCCTGGGGACTTTCCACACCCTAACTGAC  
ACACATTCCACAGCTGGTTCTTTCCGCCTCAGAAGGTACACAGGCGAAATT  
GTAAGCGTTAATATTTTTGTTAAATTCGCGTTAAATTTTTGTTAAATCAGC-

Figure 33C

TCATTTTTTAACCAATAGGCCGAAATCGGCAAAATCCCTTATAAATCAAAA  
GAATAGACCGAGATAGGGTTGAGTGTTGTTCCAGTTTGGAACAAGAGTCC  
ACTATTAAAGAACGTGGACTCCAACGTCAAAGGGCGAAAAACCGTCTATC  
AGGGCGATGGCCAC

FIGURE 33D

tcaacgacaggagcacgatcatgcgacccgtggccaggacccaacgctgcccagatgcccgcgtgcccgtgctgg  
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cttggagtggtaaatccgttagcgagggtccgcccgttccattcagggtcgagggtggcccggctccatgcaccgcgacg  
caacgcggggaggcagacaagggtatagggcgccgtacaattccatgccaacccgttccatgtctcgccgaggcggc  
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taatggcctgcttctcgccgaaacgttgggtggcgggaccagtgacgaaggcttagcgaggggcgtgcaagattccgaat  
accgcaagcgacaggccgatcatcgctcgctccagcgaaagcggtcctcgccgaaaatgaccagagcgctgcccgc  
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GCCCTAGAAAGCTTggcgtaatcatggctatagctgttccgtgtgaaattgttatccgctcacaattccacac  
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Figure 34A







GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAA  
TCAATATTGGCTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTA  
CATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG  
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT  
ATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCCGCTGGCTGACCG  
CCCAACGACCCCCGCCCATTGACGTCAATAATGACGTATGTTCCCATAGTA  
ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA  
ACTGCCCACCTTGGCAGTACATCAAGTGTATCATATGCCAAGTCCGCCCCCT  
ATTGACGTCAATGACGGTAAATGGCCCCGCTGGCATTATGCCCAGTACATG  
ACCTTACGGGACTTTTCTACTTGGCAGTACATCTACGTATTAGTCATCGCT  
ATTACCATGGTGATGCGGTTTTTGGCAGTACACCAATGGGCGTGGATAGCG  
GTTTGACTCACGGGGATTTCCTCAAGTCTCCACCCCATGACGTCAATGGGAG  
TTTGTTTTGGCACCAAAAATCAACGGGACTTTCCAAAATGTCGTAACAACG  
CGATCGCCCCGCCCCGTTGACGCAAATGGGCGGTAGGCGTGTACGGTGGGA  
GGTCTATATAAGCAGAGCTcgtttagtgaaccgtcagatcactgaattctgacgacactgattaacggc  
catagaggcctcctgcagaactgtcttagtgacaactatCGATTTCCACACATTATACGAGCCGAT  
GTTAATTGTCAACAGCTCATGCATGACGTCCCGGGAGCAGACAAGCCCCGacc  
atggctcgagTAATACGACTCACTATAGGGCGACAGGTGAGTACTCGCTACCTT  
AAGAGAGGCCTATCTGGCCAGTTAGCAGTCGAAGAAAGAAGTTTAAGAGA  
GCCGAAACAAGCGCTCATGAGCCCGAAGTGGCGAGCCCGATCTTCCCCAT  
CGGTGATGTCGGCGATATAGGCGCCAGCAACCGCACCTGTGGCGCCGGTG  
ATGCCGGCCACGATGCGTCCGGCGTAGAGGATCCACAGGACGGGTGTGGT  
CGCCATGATCGCGTAGTCGATAGTGGCTCCAAGTAGCGAAGCGAGCAGGA  
CTGGGCGGGCGGCCAAAGCGGTCTGGACAGTGCTCCGAGAACGGGTGCGCAT  
AGAAATTGCATCAACGCATATAGCGCTAGATCCTTGCTAGAGTCGAGATCT  
GTCGAGCCATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAG  
GCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCCCCCTGACGAGCATCAC  
AAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAG  
ATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTGCGCTCTCCTGTTCCGAC  
CCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGCG  
GCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTTCG  
CTCCAAGCTGGGCTGTGTGCACGAACCCCCCGTTCAGCCCGACCGCTGCGC  
CTTATCCGGTAACATATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATC  
GCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAG  
GCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAA  
GGACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAA  
GAGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTT  
TTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAAGGATCTCAAGAA  
GATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAAACCTCA  
CGTTAAGGGATTTTGGTCATGAGATTATCAAAAAGGATCTTCACCTAGATC  
CTTTTatcgggtgtgaaataccgcacagatgcgtgaaggagaaaataccgcatcaggaaattgtaagcgttaataattcag  
aagaactcgtcaagaaggcgatagaaggcgatgcgctgcgaatcgggagcggcgataaccgtaaagcaogaggaagcg  
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ccggccacagtcgatgaatccagaaaagcggccattttccacatgatattcggcaagcaggcatgccatgggtcacga  
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gacaggagatcctgccccggcacttcgccaatagcagccagtccttcccgttcagtgacaacgtcgagcacagctgc  
gcaaggaaacgcccgtcgtggccagccacgatagccgctgcctcgtcttcagttcattcagggcaccggacaggtc-

FIGURE 35A

ggtcttgacaaaaagaaccgggcccctgcgctgacagccggaacacggcggcatcagagcagccgattgtctgtgt  
 gccagtcatagccgaatagcctctccaccaagcgccgggagaacctgcgtgcaatccatcttgttcaatcatgcgaac  
 gatcctcatcctgtctcttgatcagagcttgatccctgcgccatcagatccttggcggcgagaaagccatccagttacttt  
 gcagggcttgtcaaccttaccagatAAAAGTGCTCATCATTGGAAAACGTTCAATTcTGAG  
 GCGGAAAGAACCAGCTGTGGAATGTGTGTCAAGTTAGGGTGTGGAAAGTCC  
 CCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGCATGCATCTCAATTAGTCA  
 GCAACCAGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCA  
 AAGCATGCATCTCAATTAGTCAGCAACCATAGTCCCGCCCCCTAACTCCGCC  
 CATCCCGCCCCCTAACTCCGCCAGTTCCGCCCATTTCTCCGCCCATGGCTG  
 ACTAATTTTTTTTATTTATGCAGAGGCCGAGGCCGCCTCGGCCTCTGAGCT  
 ATTCCAGAAGTAGTGAGGAGGCTTTTTTGGAGGCCTAGGCTTTTGCAAAAA  
 GCTTGATTCTTCTGACACAACAGTCTCGAACTTAAGGCTAGAGCCACCATG  
 ATTGAACAAGATGGATTGCACGCAGGTTCTCCGGCCGCTTGGGTGGAGAG  
 GCTATTCGGCTATGACTGGGCACAACAGACAATCGGCTGCTCTGATGCCGC  
 CGTGTTCGGCTGTGAGCGCAGGGGGCGCCCGGTTCTTTTTGTCAAGACCGA  
 CCTGTCCGGTGCCCTGAATGAACTGCAGGACGAGGCAGCGCGGCTATCGT  
 GGCTGGCCACGACGGGCGTTCTTGGCGAGCTGTGCTCGACGTTGTCACTG  
 AAGCGGGAAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAGGATCTC  
 CTGTTCATCTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCA  
 ATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTGACCACCAA  
 GCGAAACATCGCATCGAGCGAGCACGTAATCGGATGGAAGCCGGTCTTGT  
 CGATCAGGATGATCTGGACGAAGAGCATCAGGGGCTCGCGCCAGCCGAAC  
 TGTTCCGCCAGGCTCAAGGCGCGCATGCCCGACGGCGAGGATCTCGTCGTG  
 ACCCATGGCGATGCCTGCTTGCCGAATATCATGGTGGAAAATGGCCGCTTT  
 TCTGGATTTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAGGAC  
 ATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCT  
 GACCGCTTCCTCGTGCTTTACGGTATCGCCGCTCCCGATTTCGACGCGCATC  
 GCCTTCTATCGCCTTCTTGACGAGccaTTCTgctggcaggtaagtcgcagccctggcgtcgtgatt  
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 tggactaattatggacaggactgaacgtcttgctcgagatgtgatgaaggagatgggaggccatcacattgtagccctctg  
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 ctatgactgtagattttatcagactgaagagctattgtaatgaccagtcaacaggggacataaaagtaattgggtggagatgat  
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 agactttgttgatttgaattccagacaagttgttgtaggatgcccctgactataatgaatacttcagggttgaatcat  
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 CTAATTGAGATGCATGCTTTGCATACTTCTGCCTGCTGGGGAGCCTGGGGA  
 CTTTCCACACCCTAACTGACACACATTCCACAGCTGGTTCTTTCCGCCTCAG  
 AAGGTACACAGGCGAAATTGTAAGCGTTAATATTTTGTAAATTCGCGTT  
 AAATTTTTGTAAATCAGCTCATTTTTTAACCAATAGGCCGAAATCGGCAA  
 AATCCCTTATAAATCAAAAGAATAGACCGAGATAGGGTTGAGTGTGTTCC  
 AGTTTGGAACAAGAGTCCACTATTAAGAACGTGGACTCCAACGTCAAAG  
 GGCGAAAAACCGTCTATCAGGGCGATGGCCAC

Figure 35B

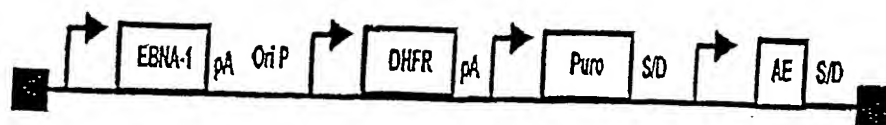


FIGURE 36

GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAA  
TCAATATTGGCTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTA  
CATTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG  
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT  
ATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCG  
CCCAACGACCCCGCCCATTTGACGTCAATAATGACGTATGTTCCCATAGTA  
ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA  
ACTGCCCCTTGGCAGTACATCAAGTGTATCATATGCCAAGTCCGCCCCCT  
ATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCAGTACATG  
ACCTTACGGGACTTTCCTACTTGGCAGTACATCTACGTATTAGTCATCGCT  
ATTACCATGGTGATGCGGTTTTGGCAGTACACCAATGGGCGTGGATAGCG  
GTTTGACTCACGGGGATTTCCTAAGTCTCCACCCCATTTGACGTCAATGGGAG  
TTTGTGTTTGGCACCAAAATCAAGGGGACTTTCCAAAATGTCGTAACAACCTG  
CGATCGCCCGCCCCGTTGACGCAAATGGGCGGTAGGCGTGTACGGTGGGA  
GGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCACTGAATTCTG  
ACGACCTACTGATTAAACGGCCATAGAGGCCTCCTGCAGAACTGTCTTAGTG  
ACAACTATCGATTTCCACACATTATACGAGCCGATGTTAATTGTCAACAGC  
TCATGCATGACGTCCCGGGAGCAGACAAGCCCGACCATGGCTCGAGTAAT  
ACGACTCACTATAGGGCGACAGGTGAGTACTCGCTACCTTAAGgcctatctggccg  
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FIGURE 37A

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CACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGC  
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Figure 37B

TTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAA  
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 CTTTTATCGGTGTGAAATACCGCACAGATGCGTAAGGAGAAAAATACCGCAT  
 CAGGAAATTGTAAGCGTTAATAATTCAGAAGAACTCGTCAAGAAGGCGAT  
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 GCCGAAATCGGCAAAATCCCTTATAAATCAAAAGAATAGACCGAGATAGG  
 GTTGAGTGTTGTTCCAGTTTGAACAAGAGTCCACTATTAAAGAACGTGGA  
 CTCCAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATGGCCAC

Figure 37C